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ARTICLE VIII.

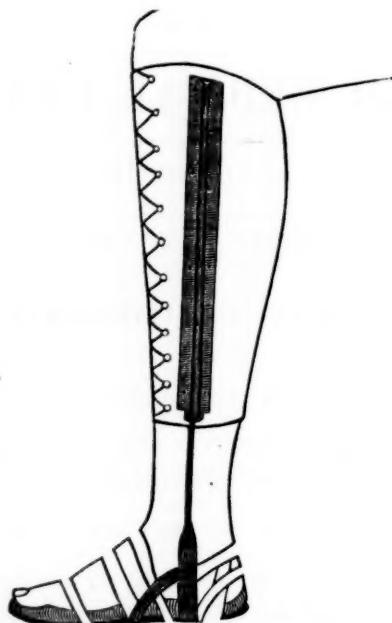
A NEW APPARATUS FOR MAKING EXTENSION  
AT THE ANKLE-JOINT.

By JULIEN S. SHERMAN, M.D., Chicago.

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While we have very efficient means for making extension at the hip and knee, and the results of such treatment have been so successful, the ankle-joint has not received the attention, in this direction, that its diseases demand. It is as necessary to remove pressure from an inflamed ankle as from an inflamed hip or knee-joint. The application is, however, more difficult, and, for that reason, has not been used as frequently as desirable. Dr. SAYRE, some time since, devised an instrument for this purpose, in which both the extension and counter-extension were made by adhesive straps. These are liable to become torn and detached, requiring frequent renewal, especially those upon which the counter-extending force is brought to bear. At the same time, the patient is required, in most instances, to use crutches.

The annexed cut represents an apparatus which I have lately been using, and have found most satisfactory in every respect. The counter-extension is made by means of a *leather socket*, upon the same principle that I represented for the knee-joint, in the January No. of the EXAMINER.



Apparatus for Making Extension at the Ankle-Joint.

In order to construct it properly, a cast of the patient's leg, from the knee to the ankle, should be taken in plaster of Paris. It is not necessary to include the foot. A piece of sole leather should then be soaked in water, until perfectly soft and pliable, and then moulded and firmly tied upon the cast. It should remain in this condition until thoroughly dry, when it will be found to form a strong socket, *exactly* corresponding to the shape of the leg from which the cast was taken. A steel sole is then cut, the shape of the bottom of the foot, being somewhat narrower beneath the instep and heel. From this, and riveted to its under surface, rises, on either side, a steel rod, bent to the shape of the limb; upon its upper two-thirds a screw is cut. This rod is received into a tube, which is attached to the socket. The screw carries a nut, by which the extension is regulated. The rod is braced to the sole by an additional strip of steel on either side. The socket is lined with buckskin

and provided with eyelets and lacers. Padding is not necessary, as it corresponds so accurately to the limb that the pressure is easily tolerated. A layer of *sponge rubber* is placed upon the sole, which gives an elastic surface to strap the foot upon, and one which will not *pack or become hard*, as is the case with most substances used for this purpose.

The apparatus is applied by first adjusting and lacing the socket; the rods are next inserted in the tubes, and the steel sole brought up against the bottom of the foot; adhesive straps, an inch in width and sufficiently long to pass around the foot and heel, are next applied, so as to bind them firmly down to the sole; extension is then made, by turning the nuts upon the rods. By this means, all pressure upon the inflamed surfaces will be overcome, and the deformity of "talipes equinus," so frequent in diseases of this joint, prevented, and the best possible condition for recovery obtained. In walking, the patient bears all his weight in the socket, relieving entirely the ankle-joint.

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#### ARTICLE IX.

### CURE OF A CONFIRMED OPIUM-EATER.—RECORD OF THE SYMPTOMS.

By E. ANDREWS, M.D., Professor of Surgery in Chicago Medical College.

I do not remember to have seen anywhere an accurate record of the symptoms which follow when an opium-eater breaks off suddenly from his pernicious indulgence. I am induced, therefore, to present the following case from my practice, believing that it will be instructive to the profession:—

R. G——, aged about 35 years, of good general habits and character, sent for me to his house, and informed me that he was addicted to the use of opium, and desired to break off the habit. He stated that the appetite was acquired from the long-continued prescription of anodynes by his physician, some

two years ago, during a painful sickness. Since then his tolerance had gradually increased, until his present allowance was ten grains of sulphate of morphia a-day, which he took in two doses. He informed me that he had no love for it, and had got past deriving any pleasure from its use; his daily allowance merely serving to keep him out of an intense but vague feeling of wretchedness, which seized upon him when he attempted to go without his doses. His countenance presented a slightly haggard and nervous aspect, but otherwise there was no appearance of physical or mental deterioration. He was very apprehensive, as most opium-eaters are, that total abstinence from his drug would kill him. I assured him that he would be very miserable for a few days, but that he would not die. I accordingly directed him to stop at once, and took his word of honor, to use no opiate unless I ordered it; I promised to watch him closely, and that if he incurred any danger of dying I could easily prevent that by giving some small doses of morphine, at the proper time. I further told him that he might as well die as be an opium-eater. I then removed all opiates from his house, and prescribed some pills of quinine, cannabis indica and hyoscyamus to occupy the attention of his nervous system. The following is the history of the subsequent days:—

*1st Day.*—Found him feeble, restless, very weak, and unable to get out of bed. Had no sleep, terribly restless, at times delirious, but though more generally rational. Has severe pains occasionally in the sternum, and the lower part of the spine, but the chief distress is an intolerable, undefinable "misery." His pulse is 95, and very soft and weak. His determination to persevere holds out well. Has frequent vomiting and some diarrhoea. The pills seem to be totally powerless to ease him. Gave a few inhalations of ether without any increase of comfort; potations of whiskey or brandy are vomited up. Every effort to find a substitute for the opiate seems almost a total failure. Oyster soup for nourishment.

*2d Day.*—Mind slightly wandering in the morning, but rational the rest of the day. Vomits occasionally, and has

slight diarrhoea. Pulse 68, and stronger. Milk punch with wine and crust coffee for nourishment. Cannot retain solid food. No medicine.

*3d Day.*—Mind wandering again in the morning. Pulse 66, but very feeble. Countenance shrunk. Some vomiting and diarrhoea. Feeling uneasy lest his prostration should go too far, I gave him three small doses of laudanum combined with hyoscyamus and cannabis indica. He revived so rapidly and decisively that I was satisfied that he was in no danger, and forbade any more to be given. Beef-tea with wine and crust coffee.

*4th Day.*—Morning. Slept five hours for the first time. Rational; no vomiting nor purging. Unable to sit up yet. Tincture of cinchona, hyoscyamus, and cannabis indica.

*Afternoon.* More prostrate. Hitherto his courage has kept up, and he has not asked for morphine. Now he is broken down and begs for it. Gave one small dose which exhilarated him surprisingly, forbade any more.

*5th Day.*—No vomiting, but an exhausting diarrhoea. Tried to check it with astringents, terebinthnates, etc., without success. Was obliged to add a little opium, which accomplished the purpose and greatly revived him.

*6th Day.*—Diarrhoea worse again; checked it with pills containing large doses of nitrate of silver, and small doses of opium. Appetite improves.

*7th Day.*—Diarrhoea returned and was checked again by the same pills. Feels better; sits up in bed.

*8th Day.*—Improving. No medicine.

*9th Day.*—Improving, dressed, and lying on a sofa. Tincture of nux vomica as a tonic.

*11th Day.*—Doing finely; the nux vomica has produced a great increase of muscular tone, eats well. No diarrhoea. Stopped the medicine.

*13th Day.*—Improving. Walks about the house a little. No medicine.

*15th Day.*—Doing finely. Has no desire for opium, feels perfectly comfortable, though weak. The tongue, which the

first few days had a dense white fur, is now clean. Advised him on no account to take any opiate, nor to prop up his debility by substituting alcoholic drinks, lest he merely exchange one bad habit for another, but to recover the balance of his strength by the vigor of his own constitution. Discharged from treatment, apparently cured of his appetite.

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#### ARTICLE X.

#### KERNEL OF CORN IN THE TRACHEA.—TRACHEOTOMY.—EXPULSION OF FOREIGN BODY.

By E. ANDREWS, M.D., Prof. of Surgery in Chicago Medical College.

Mr. S., of the town of M., brought me his child, which had, a few days previously, been playing with some corn-cobs, and had been seized with a sudden fit of strangling and coughing. The child was feverish, coughed constantly, had little sleep, and showed a distressed and anxious expression of countenance. The foreign body could be distinctly heard to rattle up and down the trachea with every inspiration and expiration. I administered ether to anaesthesia, and cut down upon the trachea above the isthmus of the thyroid body. After clearing the surface of the organ so as to have a distinct view. I inserted a scalpel and severed three or four rings of the trachea, making a perpendicular slit from the thyroid body to the cricoid cartilage. Drawing asunder this opening the next expiration drove the kernal of corn up into the orifice, where it hung an instant and was then sucked in again and disappeared. The second expiration brought it up again and expelled it with such force that it flew two feet from the patient. The incision was then closed with adhesive straps, and the patient made a good recovery.

## ARTICLE XI.

## PELVIC ABSCESS.

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BY MORTON M. EATON, M.D., of Peoria, Ill.

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This article is written more as a caution to the use of pessaries in the treatment of prolapsus uteri, than with any hope of offering anything new on the treatment of "Pelvic Abscess," which, I believe, is well established. I may remark, however, that such cases are not very desirable, as the investigation and treatment of the case must be very embarrassing to both physician and patient, especially if the patient is a fine lady in the first walks of life, and you are called to take charge of the case after a good physician has been dismissed.

I will now relate a case which has been of interest to me from its rarity, I never having had but one case of the kind before.

Was called to see Mrs. L., of this city, wife of a merchant living on — st., September 5th, 1866. Found that Dr.—, a very fine physician, so called, had been attending and treating her; first for "falling of the womb," in which he had used various hard pessaries, afterwards had treated her for ulceration of the os uteri (the prolapsus not being cured), then again applying the pessaries; the whole time of his treatment having extended over a year or more, nearly ever since the birth of her only child, some 15 months since, had been dismissed, and I was requested to take charge of the case, which I hesitated to do, because I had great respect for the physician that had been employed over a year and dismissed. But assented after urgent solicitation by the patient and her mother, who had been a patient of mine six years since, while suffering from some female complaint. I consented to examine the case.

I found her plethoric, aged 24 years, the mother of one child; now confined to her bed, where she had already been for over two weeks, complaining of severe pain in the pelvis, and in the hypogastric region. Pulse 110, skin dry, tongue with a white coat; defecation produced severe pain, and the erect posture could not be endured; micturition painful and desire frequent;

abdomen tender. On attempting to make a digital examination per vaginum, I found all the parts so sensitive and so much inflamed and swollen I desisted, and contented myself with knowing that all the organs within the pelvis were highly inflamed, and that I had reason to fear the formation of a pelvic abscess. I ordered fomentations of hops over the external genetalia and hypogastric region, and gave opii. pulv. gr. ss., et hydrarg. chlo. mit. gr. j., every three hours.

*Sept. 7.* Discontinued the mercurial and continued the opiate, and on examination finding considerable swelling on one side of the anus, I changed the hops for a poultice of flax-seed meal, being now well satisfied an abscess had formed, and hoping to have it open externally in its most depending situation. But the swelling lessened the next two days under the application of the poultice, I thought possibly I would not have an abscess; but on making a digital examination per vaginum, which the subsiding of the inflammation permitted, I detected a large fluctuating tumor to the right side of the vagina and posteriorly to the same. I then used vaginal injections of warm water, hoping the abscess would open into the vagina, but I was disappointed; for on the next day, Sept. 12th, it opened into the rectum, and discharged profusely. I now gave the elix. of the valerianate of ammonia as an anodyne, and discontinued the opiate, and ordered an enema of warm water and soap twice a-day. Tried a compress in the vagina to press the sides of the abscess together and cause union, and prevent the accumulation of matter, but it could not be retained. The os uteri was very tender and very low in the pelvis. Applied an elastic abdominal supporter to the abdomen to press the bowels up, and take off the pressure of the bowels from the uterus, and used no treatment for about two weeks, except the supporter, the valerian to quiet the nerves, and gave potass iodid, 3 gr. doses, with syr. sarsaparilla three times a-day. At this time, Sept. 26th, she could sit up without suffering any bearing down pain, but on rising, a pouch was formed beside the rectum, and it being fluctuating, I was certain it contained matter, and feared faecal matter besides. I accordingly opened the tumor with a sharp pointed bistoury,

and considerable pus escaped, but nothing of a faecal character. I now washed out the cavity with soft tepid water, and injected solu. iodine :—Iodine gr. v., potass iodid. gr. xij, aqua  $\frac{5}{j}$ , once a-day, enjoining rest and a farinaceous diet for a week; when I directed her to sit up, and she found she could do so by using a soft pillow to sit upon. She still wore the abdominal supporter, and declared herself feeling better than she had for a year. I gave her elix. bark et ferri protox in  $\frac{5}{j}$  doses, and used the iodine 10 gr. to the  $\frac{5}{j}$  of water once in two or three days. The discharge constantly grew less and less, until Nov. 2d, when it ceased; Nov. 10th, patient discharged cured. By the constant use of the abdominal supporter, the uterus had regained its natural position without any direct treatment, (so called); although I claim that the taking off of the weight of the abdominal viscera from the uterus is the most philosophical treatment in some cases, and I believe this was one. Nov. 20th, saw Mrs. I. at my office, who requested an examination of the uterus to know that those *ulcerations* were cured. Agreeable to her request, I examined her with a bladed speculum, and found the os uteri perfectly healthy, and all the parts, so far as I could learn, were healthy also.

I told her she was "all right," needed no treatment, but to wear the abdominal supporter. Jan. 1st, I learned from Mrs. I. that she was still perfectly well, and had experienced no pain or trouble of any kind for a long time.

Now this patient had not been recently confined, or exposed to those causes which ordinarily produce this complaint; it is true that authorities state that these abscesses sometimes form without any known cause. But, whatever may have been the cause, in this case I am certain she was treated by authority for the prolapsus, etc. But I do feel disposed to discourage that too common practice with some of finding ulceration and using caustics; and prolapsus and using pessaries and causing ulcerations, mayhap; and it may be proper to state here, (though I never said anything of the kind to the patient), that I think these things might produce abscess. I have cured some seven or eight cases of procidentia and prolapsus by the use of

the abdominal supporter alone, during the past year. It is safe. It is comfortable for the patient, and is liable to do no injury, that I am aware of; it certainly cannot produce "pelvic abscess."

One fact in this case was as favorable as remarkable, that no faecal matter found its way into the abscess through the fistula in ano, which existed. In most cases of this kind, I believe it would be advisable, (if the patient would consent), to open the abscess through the vagina, which might prevent its pointing in the rectum, where usually it is very difficult to heal. This might also have prevented the necessity, which afterwards arose, of opening it externally.

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#### ARTICLE XII.

##### TO THE EDITOR OF THE CHICAGO MEDICAL EXAMINER:—

SIR:—I wish to call your attention, and through the pages of your excellent Journal, that also of the profession generally, to a little work lately issued from the press of J. B. Lippincott & Co., Philadelphia, and entitled "Infantile Paralysis, and its attendant Deformities."

The increasing frequency of this malady in this country, especially among the more active and intelligent portion of the community, and the meagreness of literature on this really important subject is, it would seem, a sufficient reason why every physician should welcome the appearance of this really practical, and, therefore, valuable little treatise. It is the production of Dr. Charles F. Taylor, of New York City, who is well known to the profession as an earnest and successful worker in the department of orthopædic surgery, and whose wide experience in the treatment of this class of cases has eminently qualified him for his task.

This monograph is characterized by the same originality of thought and sound common sense which have distinguished the previous literary efforts of this writer. The ideas therein pre-

sented are not to be looked upon as the idle speculations of the theorist, but may be safely accepted as facts which have been established upon the firm foundation of extensive and prolonged observation, and which may be verified by any physician in whose practice cases of infantile paralysis may occur.

After defining the term "Infantile Paralysis," and briefly glancing at its causes, the increasing frequency of its occurrence, its pathology and symptomatology, and mentioning some of the peculiar characteristics of this form of paralysis, the author passes on to the treatment, the consideration of which occupies the larger portion of the work. Considerable space is devoted to the examination of the mechanical causes of the various distortions, which are likely to, and, indeed, almost always do, occur during the progress of this malady, but which the writer clearly demonstrates to be entirely preventable.

The facts and arguments contained in the pages of this interesting and original little book are finally summed up in the following propositions, viz.:—

"1. Infantile paralysis is an arrest of vegetative development from some unknown cause.

"2. The characteristics of this form of paralysis suggest a peripheric blight rather than a loss of central nerve power.

"3. With diminished nutrition, temperature, and muscular power, there is also diminished muscular irritability; and there is no such thing as involuntary or reflex contraction in infantile paralysis.

"4. The shortening of certain muscles, is not a necessary consequence of infantile paralysis; and when it does occur, it is simply the adaptation of their length to the position they happen to be in.

"5. It is entirely accidental *which* muscles become shortened, whether flexors or extensors.

"6. Hence, deformities are not a necessary consequence of infantile paralysis, and when they are allowed to occur, the process of recovery is arrested.

"7. When deformities have already formed, they should be treated for an ultimate end, viz.: to bring the patient back to

the place from which he should not have been allowed to diverge, where the treatment for his *paralysis* should begin.

"8. Hence, tenotomy and mechanical appliances are only means to an end—the first steps of a course of treatment having in view the restoration of the muscular power.

"9. The most natural means for this purpose is the supply of local heat—involving increased local circulation—together with local exercise, corresponding with the position and ability of the part exercised.

"10. The element of *time* must also be taken into consideration."

The foregoing views are elucidated by the relation of some eight or ten cases, the histories of which are well given, and fully illustrate the points which the writer makes.

Not the least interesting feature of the work is to be found in the beautiful wood-cuts which adorn its pages, giving the reader a very clear idea of the distortions usually following the accession of this form of paralysis, and also completely illustrating that form of treatment which the author has found to be followed by the best results in these cases. E.

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#### ARTICLE XIII.

#### REMARKS ON DIFFERENT SUBJECTS.

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By N. HOLTON, M.D., Buda, Ill.

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Read to the Members of the Military Tract Medical Association, Dec. 11, 1866.

After amputation by what is known as the flap operation, there is a redundancy of muscle in many cases. This I have often seen, both in civil and military surgery, and, because of this happening to me, I thought it might or had occurred in the experience of others. It does not succeed well if the integuments are drawn too tightly to cover the muscles in coapting them, and, on this account, it becomes necessary to reamputate the muscles before the integuments can be properly adapted together so as to secure union by the first intention.

It occurred to me that, in most cases, by grasping the parts from which the flap was to be made, and retracting the skin, the difficulty above spoken of might be avoided.

In some cases of amputations by the flap method, the weight of the flaps has been thought to be an objection. This objection, perhaps, would not have as much weight in civil as military practice, but some in both.

In a case where I amputated below the knee, some weeks ago, the posterior flap being formed of the muscles of the calf of the leg, and this, being the principal flap, was quite heavy. If this flap is allowed to draw down its whole weight, it will be quite sure to destroy the vitality of the tissues where they are drawn across the tibia, and, consequently, result in sloughing. This was likely to be the result in the case above alluded to, but upon being carefully supported by a double inclined plane curved splint, the patient went on well again. They may be supported by cushions or pillows sufficiently for all practical purposes. In cases where there is considerable suppuration or erysipelatous tendency, I am in the habit of prescribing the muriated tincture of iron freely, and have never had patients affected with traumatic erysipelas or hospital gangrene where it was used as a prophylactic. I am indebted to Prof. E. ANDREWS, of the Chicago Medical College, for this idea.

#### *Two Cases of Spina Bifida.*

On June 29th, 1866, I was called to attend Mrs. M. in her first labor, and, after a little more than usually hard time, she was delivered of a large male child, affected with spina bifida. The unusually hard labor was caused, I thought, by the cord being around the body just above the pelvis. Instead of a tumor on the back, the tissues were gone considerably below the surrounding parts in the region of the two first lumbar vertebrae, and the posterior half of the vertebræ seemed to be gone. The parietal and frontal bones were less ossified than usual, leaving the parietal bones widely separated along the median line and extending into the frontal bone as far as a level of the superciliary ridge. Otherwise, the child was well developed. I thought that if the parts could be sufficiently supported, that

lacked development, or had lost their integrity, that the function of organization might go on and the cranial bones become ossified. To carry out this, I ordered compress and bandage, and, under this management, the ulcer on the spine became covered with a thin, parchment-like membrane, but, perhaps for want of thoroughness on the part of the parents, or from some other cause, the tumor grew and the contents of the cranium protruded more and more beyond the bones. About the 10th of October, there came a hole in the tumor of a very minute size, and on the 14th the child died.

There was nothing uncommon about the other case, and it did not live but a few weeks. It was accompanied by talipes, a very usual thing, I believe, in spina bifida. The mother of the first case was severely frightened by a horse kicking while she was in the buggy, three months before her accouchement, and the second fell on the ice in the early part of gestation, hurting her back severely. Whether these, or the fact of the cord being tightly drawn around the body of one child, had anything to do with these cases or not, I am not satisfied.

Prof. D. BRAINARD, of Rush Medical College, in the catalogus for 1847 and 1848, says, "Cure of Spina Bifida by Injections of Iodine." But, unfortunately for the practice, Dr. BRAINARD's case soon after died; and as that was so long ago, and the practice not yet confirmed, I suppose it is a failure. Can these cases be cured? I confess I do not know.

In conversation with Dr. H. NANCE, of Kewanee, upon spina bifida, he said there was a case in his town, in the last cervical or first dorsal vertebra, of small size, in which the tumor was covered with a strong membrane; and that the child was doing well, could walk, and do anything that other children do.

*A Case of Chronic Inflammation of the Urinary Organs.*

This, I wish to include the kidneys, ureter, bladder, and urethra.

On the 11th of September, 1866, I was consulted by Mr. H., for what he called gravel, and, on inquiry, I elicited the following history:—He had been in the cattle business, in Missouri and Texas, through the season, almost constantly riding on

horseback, and had noticed a diminishing stream of urine, till, suddenly, he was unable to pass it at all, (this was two weeks before I saw him,) and compelled him to consult a physician, who relieved him with the catheter. When I first saw him, he could not pass urine, and he was again relieved by the use of the catheter, without difficulty; but the urine was largely mixed with blood, and some bloody mucus was entangled in the eyes of the catheter. At this time, there was very slight constitutional disturbance, and, after a careful examination, could find but little soreness or other evidence of organic disease. He had a good appetite, and felt pretty well generally. From these data, I gave the patient encouragement that he would recover his health in a short time.

He went on well until the 27th of the same month, when, suddenly, he was taken worse than ever—urine retained; some throbbing pain in region of prostate gland, and pain in the back; and a slight febrile movement generally, together with great nervousness.

These symptoms were relieved, and recurred again and again until the 20th of October, when I told him the full extent of the mischief, according to my view of the case, and that he could not be cured for at least three months, and, perhaps, a longer time. This was such poor consolation to him that he concluded to dispense with my services and seek aid elsewhere.

On the 11th of October, I was again summoned to see Mr. H. Found him unable to pass urine; laborious breathing; a black, dry tongue; pulse very frequent, small, and weak; entire loss of appetite; and unable to raise up in bed. At this time, I told him I would not take charge of the case unless he would allow counsel. This was readily assented to, and I sent for E. ANDREWS, M.D., of Chicago, who promptly responded, verified the diagnosis, and we agreed upon a course of treatment; but he gradually run down, and died on the 11th of November.

The reason I report this case is, that such cases are very infrequent in my practice, and the absence or obscurity of prominent symptoms, leading one to fully appreciate the importance of the case he has to deal with at first; the great dif-

ficulty in curing them when they are known; and the great lack of authority on the subject, within the reach of the country practitioner. The treatment, I understand to be astringent injections into the bladder, the best of which is nit. silver, in weak solution at first, and increased in strength as it can be tolerated; and the alkalies, buchu, pareira brava, tr. ferri chloridi, potassa brom., and other remedies of this class, by the mouth; rest, and care that the bowels are kept in a soluble condition.

May I express the wish, that some member of the profession, of large experience in this class of diseases, will write a monograph upon them.

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### Selections.

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#### REPORT ON THE ETIOLOGICAL AND PATHOLOGICAL RELATIONS OF EPIDEMIC ERYSIPelas, SPOTTED FEVER, AND DIPHTHERIA.

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By N. S. DAVIS, M.D., Prof. of Principles and Practice of Medicine and of Clinical Medicine, in Chicago Medical College.

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[From the Transactions of the American Medical Association.]

There is no department of medical study environed with greater difficulties than that of etiology. And especially is this true of the etiology of such diseases as are styled epidemic. They appear at uncertain, and often remote, intervals; in sections of country widely diverse in relation to geological formation, climate, season, etc.; attack large numbers in quick succession; and then disappear almost as rapidly as they were developed. The elements and agents, mental and physical, ponderable and imponderable, that are continuously surrounding and capable of impressing an influence upon every living human being, are so numerous and capable of such varied combinations that the problems presented for solution in the study of the causes of disease are among the most complex and obscure that can engage our attention. To solve these problems successfully

requires a complete record of the electrical, barometrical, thermometrical, hygrometrical, and ozonic conditions of the atmosphere for a series of years; the position and composition of the soil; the quality of the water; the individual and social habits of the people in relation to dress, diet, drinks, structure of houses, and habits of thought, in direct connection with a faithful account of the kind, amount, and specific character of all the diseases that may occur, whether they are epidemic or not.

At present, so far as relates to our country, these records do not exist, except to a very limited extent, and hence the data essential for determining with accuracy the causes of any particular epidemic do not exist. To commence systematically, the work of patient and faithful observation and record of facts in relation to all the topics just named, is one of the most important steps that can be taken for the further promotion of medical science. It is easy to assume the existence of some special and subtle poison as the cause of any given epidemic form of disease, and almost equally easy to enter upon extensive and plausible speculations in relation to its effects. While to demonstrate the existence or non-existence of such a poison in connection with the prevalence of any given disease may require the patient and persistent use of all the means furnished by modern science, through a series of years. It is not surprising, therefore, that our literature should be filled with an almost endless amount of speculation in regard to fever, cholera, and blood or zymotic poisons, until the intelligent student can hardly fail to be reminded of the concoctions, fermentations, and humors of a more remote period in the history of medical science. It may not be proper to claim that every specific morbid agent or poison should be positively identified and its properties determined before its existence can be logically admitted; because certain effects may be found to follow so uniformly the coëxistence of certain circumstances, that the development of an active agent, capable of producing certain appreciable effects, may be a fair and legitimate conclusion deduced from the premises. But if we would reduce the uncertainties of medical science, lessen the number of vague, intan-

gible and contradictory generalizations in medical literature, and substitute therefor real advancement in medical science and art, we must begin by patiently recording observed facts instead of *opinions*, and rigid inductive conclusions instead of mere *assumptions*. And if that section of the American Medical Association, having charge of the subjects of meteorology, medical topography, and epidemic diseases, could devise and carry into effect a successful plan for accomplishing this change so far as relates to those departments of medical science, it would constitute a more important step for the advancement of etiology and hygiene than has been taken during the past half century.

It is certain, however, that so long as mere opinions are allowed to supply the place of facts, and every writer or teacher is permitted to assume the existence of any specific poison that he can make subservient to his theories, our literature will continue to be filled with the most discordant opinions and the most vague and diverse theories. We shall continue, as heretofore, to amuse and bewilder ourselves with speculations as contrary to the uniformity of nature's laws, as they are to the acknowledged rules of inductive philosophy. One of the most prolific sources of error in our profession consists in partial or incomplete investigations, and the record of only a part of the facts relating to any given subject. This becomes speedily apparent to every one who institutes a serious inquiry after the cause or causes of any particular form of disease. He will find abundant announcements that the disease made its appearance in a given community at such a time; attacked such a number, chiefly of such a class; continued more or less severe for such a time; and disappeared. Not unfrequently these general statements are accompanied by equally general allusions to some one prominent sanitary, hygienic, or meteorological circumstance occurring coincidently with the disease. But how few are the instances, in the whole range of our voluminous literature, in which the account of any single epidemic prevalence of disease is accompanied by so full a statement of the preceding and accompanying topographical, meteorological, and hygienic con-

ditions, including the special personal hygiene, physical and mental, of those attacked, that we can form a full and reliable idea of the influences that were brought to bear upon the properties and functions of living beings. And yet, without this completeness of facts, all etiological deductions must be more liable to be erroneous than truthful. It is probable that a careful review of the history of epidemic diseases would show them capable of being arranged etiologically into two classes. The first class embraces all such as arise directly from a specific virus or animal poison capable of being reproduced in the living animal body, and capable of being propagated in any climate, at any season of the year, and without regard to public or individual hygienic conditions. These, however much they may be influenced in their severity and fatality by collateral circumstances, are universally admitted to depend essentially upon a class of specific poisons, and hence are indisputably contagious.

The second class embraces such diseases as appear in an epidemic form only at irregular intervals; prevail only for a limited period of time; and at any given prevalence, appear incapable of propagation beyond certain geographical limits or sanitary influences. To this class belong influenza, spotted-fever, erysipelas, diphtheria, cholera, etc.

The fact that these diseases have appeared successively or at different times in almost every part of the world; at every season of the year; and among widely different classes of people, has caused their essential causes to be involved in great obscurity, and to become the theme of almost endless speculations and controversies. That they are not like endemics, dependent on causes originating in any particular soil or geological formation, is fully apparent from their occurrence in localities so widely diverse in this respect.

The most popular theory is, that a part, at least, of the diseases enumerated in this class arise essentially from some infectious poison originating from some primary focus, and spreading from there, chiefly through the atmosphere, but capable of transportation, also, in the holds of ships, in boxes of goods,

etc., to the most distant parts of the civilized world. Hence, the common expressions applied to them are, they are coming, going, or traveling. While it is generally acknowledged that local sanitary conditions exert a controlling influence over the extent and severity of any one or all of this class of diseases, yet it is claimed that they are incapable of originating them. The popular idea, however, that a pestilential poison, too subtle for identification and scrutiny, can originate at some focal point, and from thence extend from place to place around the globe, will scarcely bear the test of a rigid investigation. All the laws of chemical or physical science indicate that for the production of any inorganic body, whether solid, fluid, or gaseous, the elements entering into its composition and the circumstances under which they unite, are uniform. Again, all that has yet been ascertained in regard to the development of vegetable fungi or sporules and animaleculæ, indicates that each species of these minute organizations requires fixed local conditions for their development, and a very limited meteorological and geographical range in which they are capable of self-propagation.

To find a species of animalecule generated on the banks of the Ganges and propagating itself on the snows of Northern Russia, would be as much an anomaly in nature as to find the lion of tropical Africa flourishing in the arctic regions of North America. It is very generally alleged that each of the diseases in the class under consideration is identically the same wherever it occurs, and hence there must be an identity or specific character to the cause. If we grant this position, it simply necessitates the assumption of another, namely, that the production and propagation of an identical specific cause necessitates the presence of certain uniform materials and circumstances out of which that cause can be evolved. When we find a disease limited in its prevalence to certain geographical and geological boundaries, we naturally look to the soil as the essential source from which the cause of such disease is capable of being produced; because the composition and conditions of the soil are the uniform circumstances peculiar to the localities in question.

So too, when we find a disease identical in its character prevailing on many different geological formations, in various climates, and at different seasons of the year, the same rules of induction would require us to look for the origin of its cause in some materials and circumstances that are common to all the localities in which the disease itself prevails. And if we find man himself and the conditions of social life the only conditions uniformly present, logically we must look to these as furnishing both the materials and the conditions for evolving the immediate cause of the disease. There is no reason why diseases of a specific character and epidemic prevalence may not be engendered by disturbance of vital properties either with or without retention of certain excrementitious materials, as well as by the introduction of special poisons or miasms from without. Indeed, there are so many points of striking contrast between the first class of epidemics known to arise directly from the introduction of an animal poison capable of reproduction and propagation in the living body, and those constituting the second class, as to afford strong evidence of the entire dissimilarity of their causes.

Each individual disease of the first class has its definite period of incubation after the reception of the poison; an equally definite period of irritative fever before the local inflammations or eruptions are established; with an almost uniform period of progress, maturity, and decline of such local manifestations, thus making each case a fixed order of events, each occupying a self-limited time, and always accompanied by the evolution or reproduction of more or less of the same specific poison that had induced the disease.

It is hardly necessary to add, that no such order of events, definite as to time and duration, has been observed in influenza, cholera, diphtheria, erysipelas, or spotted-fever; and certainly no evidence of any uniform evolution of a specific poison during their progress. If, under some circumstances, the secretions and emanations from the bodies of patients sick with any one of these diseases, have appeared to be capable of communicating the disease directly to others, they have constituted rare exceptions to the general rule.

All the diseases of the first class are self-protective, except in very rare instances, occurring only once in the same individual. While the reverse is true of all those belonging to the second class.

Again, the diseases of the first class never *relapse*. Those of the second often.

There is still another point of difference having an important bearing upon the etiology of the diseases under consideration. It is, that all the diseases of the second class have their analogous or typical forms, among the ordinary sporadic diseases of each returning season. Thus, influenza has its type in the severer cases of coryza or acute catarrh; cholera, in the cholera-morbus of every returning summer; diphtheria, in follicular and erythematic inflammations of the fauces; and erysipelas, in the sporadic and traumatic cases of common occurrence.

Inasmuch as all these diseases in their sporadic forms or types are everywhere acknowledged to arise from strictly local meteorological and sanitary conditions, and equally conceded that in their epidemic forms they are greatly influenced both in numerical prevalence and fatality, by the same causes, would it not be more philosophical as well as more in consonance with observed facts, to attribute the epidemic form of any one of them to a simple exaggeration or modification of the same causes that give rise to sporadic cases, without calling to our aid imaginary poisons, and assuming for them powers of diffusion contrary to all the known laws of organic or inorganic matter.

These general observations have been pursued much farther than was originally intended; but they seemed necessary as an introduction to the views I wished to present in relation to the special causes of erysipelas, spotted-fever or cerebro-spinal meningitis, and diphtheria. With the exception of influenza and cholera, no diseases have prevailed more extensively as epidemics than the three just named. They are almost universally regarded by the profession as blood diseases, or, in other words, as dependent upon primary morbid conditions of the blood, inducing secondary local inflammations in various parts

of the body. A careful study of the phenomena and results of these diseases, has led me to doubt whether the morbid conditions of the blood are really primary and dependent on the introduction into it of some specific poisons from without, or whether they are the effects of a prior disturbance or perversion of those vital affinities by which the primary steps in the processes of disintegration and secretion are performed, thereby leading either to the evolution of some morbid product to be returned into the blood, or the failure to evolve some natural product which by its absence would no less certainly leave that fluid in a morbid condition. That the blood presents an unnatural or diseased condition while the system is affected by either of the diseases under consideration none will deny. But whether such change in the blood constitutes the primary or essential pathological condition on which all the subsequent phenomena and results of the disease depend, or are only a result of prior changes in the properties and functions of the organized structures is a question of more than merely speculative importance. Ever since the prominence given to pathological anatomy by the French school of which LOUIS, CHOMEL, ANDRAL, etc., were such noble ornaments, there has been a manifest tendency to confound morbid anatomy or the effects of disease with true pathology. The investigations necessary to enable me to give a positive answer to the questions just stated, have not yet been completed. But thus far, they have led me to believe that the essential causes of erysipelas are such as are capable of directly depressing and, to some extent, perverting the elementary vital affinities of the tissues, in such a direction as to disturb the processes of disintegration and to diminish the excretion of alkaline salts. This induces, speedily, an excessively alkaline condition of the blood coïncident with the accumulation of the products of a disturbed tissue metamorphosis or disintegration. The circumstances capable of producing these primary pathological changes are various, but chiefly involve alterations in the electrical and ozonic conditions of the atmosphere, often rendered more efficient by an excess of carbonic acid gas and aqueous vapor. Every practi-

cal surgeon is familiar with the fact, that if he places an undue number of wounded patients in a confined atmosphere, their wounds speedily assume an unhealthy condition, leading directly to erysipelas or gangrene; while if the same patients are left in the open air, sheltered only by tents, no such effects follow. Now it can readily be demonstrated that such confinement of the air with an accumulation of exhaled carbonic acid gas and aqueous vapor is capable of changing its ozonic and electrical conditions, even in a few hours. It is also generally conceded that these atmospheric constituents are capable of undergoing sudden and important changes over extensive districts of country, regardless of geological formations or parallels of latitude; thus affording an adequate explanation of the occurrence of the disease in localities so various, and with such variable degrees of severity. This view of the essential pathology and causation of erysipelas is corroborated by the well-known fact that the habitual use of drinks which, like alcohol, retard the natural tissue changes, decidedly predispose to attacks of erysipelas or, in other words, favor the development of the erysipelatous diathesis.

The conclusion at which I have arrived in regard to the disease promiscuously styled "spotted fever" and "cerebro-spinal meningitis," is, that as reported in our literature, no less than three or four distinct diseases have been confounded together.

The first class of cases, embracing those most extensively prevalent as well-marked epidemics, and tending most rapidly to fatal results, were no more nor less than true erysipelas, in which the cerebro-spinal nervous structures with their enveloping membranes, constituted the seat of the local inflammatory developments instead of the fauces or cutaneous surfaces. This view is sustained by the immediate preceding or coincident prevalence of well-marked cutaneous erysipelas, which has been noticed by most of the later writers on this subject; by the rapid progress of the disease; by the almost uniform aplastic character of the local exudations and changes; and by the fact of cases in which manifest erysipelas of the fauces and face has been accompanied by all the pathognomonic symptoms of

fatal cerebro-spinal meningitis. One case of this kind occurred under my own observation only a few months since. In a recent paper on the cerebro-spinal meningitis that prevailed so severely and extensively in the middle and western states between 1844 and 1848, read to the Illinois State Medical Society, Dr. J. ADAMS ALLEN, formerly in the medical department of University of Michigan, says: "Erysipelas is the most frequent and dangerous of complications. It is easily kindled upon the slightest abrasion of the surface, and often, without such a nidus, attacks the face and neck, extending to the scalp, or more rarely seizing the extremities."

Dr. J. S. JEWELL, of the Chicago Medical College, in a letter presented to the same society, speaks of witnessing an epidemic both of "spotted fever or cerebro-spinal meningitis" and of "erysipelas" in the same localities in the southern part of Illinois during the years 1862-3. Close examination of another class of cases will show them to be either modified forms of typhus or of scarlatina. While still another class, much fewer in number, and generally occurring sporadically, are simple acute inflammations of the membranes enveloping the cerebro-spinal axis and base of the brain.

In regard to diphtheria, I will only add to the observations already made, the opinion that its causative influences are analogous to, though not identical with, those of erysipelas. That while they induce such modifications of vital affinity in the tissues generally as to greatly lessen their tonicity, and such disturbances of the atomic or cell changes of tissue metamorphosis as to cause a morbid condition of the effete elements of the blood, they also produce a well marked tendency to aplastic albuminous exudations, as shown by the rapid formation of aplastic deposits on all inflamed or abraded surfaces and the elimination of albumen through the kidneys. These changes in the properties of the elementary structures and in the nitrogenous elements of the blood would necessarily develope great debility with so much spanemia or blood impoverishment, as to afford a rational explanation of such well-known and peculiar sequelæ of this disease, as unusual muscular debility, protract-

ed convalescence, and frequent paralysis, either partial or complete. I have thus compressed, into less than a dozen pages of manuscript, an outline of those views of the etiology and pathology of erysipelas, spotted fever, and diphtheria which would require the compass of a volume to illustrate the facts, which might be adduced for the purpose of testing their claim to credibility. My sole object in presenting them, is to elicit discussion and excite more rigid and extensive investigations.

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### NEW YORK ACADEMY OF MEDICINE.

Dr. Post again introduced Dr. Quinby's patient for the purpose of showing the progress of the case. He remarked that there could here be no arrest to the growth of the leg, since no portion of the tibia or fibula had been removed, and that, as a result of this operation, the patient was not prevented from wearing a boot. The patient then exhibited his control over his movements by walking in different gaits, jumping, etc.

#### CONTINUATION OF THE DISCUSSION ON CHRONIC METRITIS.

Dr. Kammerer remarked that the discussion of chronic metritis had gone back to the very premises—to wit: whether there was such a disease as chronic metritis or not. He thought that the cause of this variance lay in the fact that pathological anatomy had outstripped clinical observation. He would ask, in considering this topic, whether or not this derangement in nutrition was marked by exudation, a stagnation of the circulation, etc. Hyperæmia was no symptom, since the sexual organs suffered a recurrence of that condition every four weeks. Irritation should certainly not be confounded with inflammation; and regarding Virchow's explanation of the phenomena of inflammation as decidedly the best, he found none willing to claim that the conditions as laid down by that eminent authority were here present. That they were met with in perimetritis with pelvic peritonitis, and in endometritis, he had no doubt; but as far as the body was concerned, he should be more reserved in his opinion. French authors have no doubts of the existence of metritis. Prof. Klob, of Vienna, whose work, published in 1863, has not yet been translated, who made 1000 autopsies in the General Hospitals, failed to find a single case of genuine metritis. All the changes pointed only to hy-

peræmia. Entertaining these views, backed as they were by authority so eminent, he could only regard the term chronic metritis, as a misnomer. The subjective symptoms of chronic metritis, then, if we may allow the term as a matter of convenience, so far as our clinical observation goes, are derangements of the functions, amenorrhœa, dysmenorrhœa, sterility, etc, while the objective are an enlarged organ, with ulcerations, abrasions, and discolorations. We may very readily make out the size by what is technically known as the double touch, *i. e.* by the use of the sound simultaneously with palpation of the abdomen. The cavity may be found deeper and wider, the organ itself enlarged, which latter is, after all, the only pathognomonic symptom. He would admit, however, that we must not expect to be invariably fortunate in making out the enlargement of the organ, since the thickness of the tegumentary coverings has quite frequently foiled us. He also did not regard a tender as necessarily an inflamed uterus—for a certain amount of hyperæsthesia might be present, without looking towards any very grave disease, since pain of any account would indicate peritonitis or ovaritis. The pathological anatomy of the disease will be found to reveal a morbid condition rather than a morbid process. We may find the muscular fibres hypertrophied and the connective tissue increased in quantity, but even these may constitute merely a quantitative anomaly, and that, too, within the limits of health. The chronic induration resulting from engorgement was due to an increase of the connective tissue at the expense of the muscular fibres; the organ may have an anæmic hue, and may creak under the knife. All this was not inflammation, but merely the result of long-continued congestion or hyperæmia.

He might refer to the two forms of hyperæmia as proper to be borne in mind, while considering the case now in dispute. The arterial form is well typified in menstruation and puerperal fever; while venous congestion is exemplified in those instances where obstacles are offered to the reflux of blood, as in displacements, flexions, adhesions, and the embedment of fibrous tumors within the walls. He conceived that the diverse opinions formed regarding this condition of things might be explained by the fact that not enough stress had been laid upon such complications as peritonitis or its sequelæ of adhesions, latero-versions by the contractions of ligaments, etc. Chronic peritonitis was likewise a frequent complication.

The best remedies within our grasp were antiphlogistics and frequent tepid baths. For the accompanying endometritis,

the very first condition was to keep the orifice well dilated for the escape of the secretions, by which the mucous membranes are relieved, and the general condition rendered more comfortable. Thorough dilatation might be effected through the well known agency of bougies and sea-tangle (*laminaria digitata*) or sponge tents. He desired to call attention to two local remedies, which had not yet come into general use. The first of these was *pyroligneous acid*, first introduced to the profession by Dr. Meyer, of Berlin, and which was held in high esteem, especially by German practitioners. He would assure those disposed to give this agent a trial, that there was no danger in its use, provided the article were pure. The second remedy was *carbolic acid* in concentrated solution, which might be introduced into the cavity by a brush. No bad results have been known to occur; the only obstacle to its application he knew of, was the presence of acute peritoneal irritation or sub-acute inflammation.

When displacements existed, our only resort was, of course, to adjust them if possible; but all cases of slight hypertrophy he would let alone, unless, perhaps, when the cervix assumed the form of prolapse, he might attack the neck by surgical means, such as by the *écraseur* or by the electro-caustic method.

When the hyperæmia was due to a general cause,—to cardiac complications or tuberculosis, but little mitigation of the patient's sufferings need be expected. After all, the only real cure, in his opinion, was effected when senile atrophy ended the woman's parturient history.

Dr. Peaslee said: He had hoped to have listened instead of speaking to-night; but some of the topics which had been discussed, he thought required further elucidation.

He thought that the view he had taken at the previous meeting, of the subject under consideration, was both logical and scientific, and one which could not be successfully opposed. He had without argument admitted the existence of parenchymatous inflammation of the uterus; though he was aware that Bernutz and others doubt if acute parenchymatous inflammation of the unimpregnated uterus ever occurs; and Klob, as Dr. Kammerer has told us, admits that he has never, in all his *post mortem* examinations, been able to demonstrate parenchymatous metritis in any form. Neither had he (Dr. P.) discussed the nature of inflammation, since that would have led him too far from his main object. Dr. Kammerer has stated that its most important characteristic is an exudation of the plasma of the blood between the histological elements of the part affected, as

all must admit in the present state of general pathology. Dr. P. had simply specified the symptoms recognised by all writers as indicative of inflammation of the parenchyma of the uterus, and admitting its existence where they do exist, he had refused to admit it where they do not. But he had shown that these symptoms do not exist, and have not existed at all, in a large majority of all the cases generally included under the term chronic parenchymatous metritis; while they do appear, and then disappear again to recur, in the minority of these cases. He therefore decided that the majority are not cases of metritis at all, while metritis recurred from time to time in the minority of the cases. On further examination he found the former presented the symptoms of chronic congestion merely, while the latter presented the same state with attacks of metritis supervening upon it.

This view had been somewhat earnestly criticised at the last meeting, as he (Dr. P.) hoped it might, since it had been held by him the last fifteen years, and finds constant confirmation in his practice, and he regretted that Dr. Barker could not be present this evening, since he might wish to reply to criticisms which he (Dr. P.) should in turn feel obliged to make.

Alluding to Dr. Barker's division of the cases of chronic metritis into three classes, Dr. P. said he (Dr. B.) had committed the too common error of confounding the effects, or sequelæ, of inflammation with inflammation itself. Dr. Churchill has adopted the same classification (and added two or three classes more); but he so blends acute and chronic metritis in his account of parenchymatous inflammation of the uterus, that one can get no clear idea of the difference between them on the one hand, or between them and induration, or softening, or suppuration on the other. Dr. P. would speak only of the two first classes of cases recognised by Dr. Barker, viz.: (1) chronic metritis complicated with indurations; and (2) the same complicated with softening.

Twenty-five years ago (said Dr. P.), it was an axiom in general pathology that chronic inflammation produces induration or hardening, while acute inflammation produces softening. This statement, however, does not present the facts as they really exist, but merely a simple view of them. In the first place, we must remember that the characteristic element of the inflammatory process is an exudation of the plasma of the blood from the capillary vessels of the part affected into the intercapillary spaces, and among its histological elements. As this is, of course, itself softer than the tissue proper, the whole mass

of tissues and plasma thus become softer than the tissues above in their natural state. An immediate effect, then, of inflammation in all cases (acute or chronic) is softening. But this exudation among the tissues may subsequently be disposed of in either of three entirely distinct ways. It may (1) be entirely and promptly reabsorbed, in which case it is customary to say that the inflammation terminates in resolution; or (2) it may become organized, and thus be permanently blended with the tissues of the part, and in this case the whole mass of tissue and neoplasma together, will (in the case of a soft solid) be after a time harder than before, and we say *induration* has taken place; or (3) the exuded plasma may degenerate into pus, and be thrown out from the part, when we say *suppuration* has ensued. The accurate statement of the facts is, therefore, this: inflammation directly produces softening, as the result of its exudation of the blood plasma into the part; and if hardening ensues after a time in a part where inflammation had existed, it is due to an organization of the same plasma which at first rendered the same part softer. It does not depend on the character of the inflammation, whether acute or chronic, but merely on the fact of the organization of the plasma, instead of its reabsorption or its degeneration; and this organization requires a certain amount of time. In other words, it is a *chronic result* of an inflammation, though the latter may have been itself acute or chronic. Metritis, therefore, complicated with softening, is simply acute metritis; for the softening is one of its essential and never absent results. Of course we do not here consider fatty degeneration and other forms of softening of the uterine tissue, which have no known or suspected relation to the inflammatory process. And chronic metritis, complicated with induration, is simply hardening of the uterus from the organization of the product of a previous inflammation. Congestion is, however, very liable to continue for a longer or shorter time after the inflammatory process subsides, and hence we often find chronic congestion coëxisting with induration. Besides, we may have recurrent inflammations in an indurated uterus; but, if so, this inflammation needs no peculiar treatment on account of the induration; and the latter still remains to be treated after the inflammation subsides. The distinction of the two classes referred to, therefore, of complications with chronic parenchymatous metritis, are pathologically incorrect, and besides have no therapeutic value. On the other hand, we remember that induration is continually found without any inflammation or even congestion of the part; though sub-involution after parturition is sometimes mistaken for it.

Another error which Dr. P. had to specify was the confounding of engorgement with inflammation in the case of any organ. Some, however, go further than this, and use the terms congestion, engorgement, and inflammation, as if they mean precisely the same thing. When we study the phenomena of inflammation artificially produced in the web of the frog's foot, or the wing of the bat, we find that the stimulant which we apply produces, 1st, an increased flow of blood to, and through, the capillaries of the part (local determination of blood). 2d, a loss of power of the vessels from over distension, and, therefore, a diminished flow of blood through them (congestion); and 3d, an entire stagnation of the blood in the capillaries, and the exudation of its plasma into the inter-capillary spaces, while the corpuscles remain in the vessels (inflammation.) On the other hand, when recovery takes place, the inflammation first fades into congestion, and this into the healthy condition of the part. The difference, therefore, between inflammation and congestion is distinctly marked, and always demonstrable under the microscope. But the term engorgement simply means that the part is choked up with an extra amount of fluid, either in the vessels or between them, or both. Hence it may in one case mean mere congestion, and in another, the state produced by inflammation (the vessels distended with blood corpuscles and the plasma exuded from the vessels). But it is never properly applied to the inflammatory process itself. It has, therefore, no scientific value; and the sooner it is entirely dropped from the nomenclature of pathology, the better.

Another point to which Dr. P. desired to call attention is the statement, which had of late become quite fashionable, that the body and the cervix of the uterus are distinct organs, which he characterized as entirely incorrect, whether we consider their relations in a developmental, a histiological, an anatomical, a physiological, a pathological, or a therapeutical point of view.

1st. *Developmentally*, the cervix and the body are one and the same organ. The internal female genital organs are developed from the ovaries; each developing one-half of the uterus and one Fallopian tube. The body and cervix are continuous in structure from the first. At birth, however, the cervix is nearly twice as large as the body, constituting about two-thirds of the whole organ; and the uterus has the form of a cone, with its apex at the fundus.

2d. *Histologically*, the body and the cervix uteri are the same also. There are the same tissues in both, and both are supplied with vessels and nerves from the same sources. The ar-

angement of the mucous lining of the cervix is different from that of the body; but the tissue is the same. And besides the mucous membrane, the nerves, bloodvessels, and lymphatics, and the peritoneal investment, there is nothing but collagenous (or connective) tissue and non-striated fibre in either.

Dr. Barker has spoken of a similarity of the uterus, in a histological point of view, to cartilage and bone. But cartilage has neither bloodvessels, lymphatics, nerves, nor muscular fibre, nor any other of the tissues found in the uterus. It has only two histological elements, cartilage cells and a hyaline substance, in which they are imbedded. Bone, on the other hand, has no muscular fibres or collagenous tissue like the uterus; but owes its peculiarities to its phosphate of lime and other salts combined with osteine. Histologically, therefore, the comparison of the uterus with cartilage and bone, is incorrect.

3d. *Anatomically* considered, the cervix and the body are but parts of the same organ. It has been stated that the muscular fibres of the body of the uterus are nowhere prolonged into the neck except posteriorly. If this were really so, the cervix would be torn from the body at their junction in front in case of parturition with rigidity of the cervix; and the child would be expelled into the peritoneal cavity through the rupture. But what are the anatomical facts? Simply that the longitudinal fibres are prolonged from the body of the uterus into the cervix both anteriorly and posteriorly. Dr. P. published this statement in his work on histology, ten years ago; and he who dissects the uterus of a woman who dies within a week or two after parturition, can easily verify it. As to the arrangement of muscular fibres, there is a striking analogy between the uterine body and neck, and the body and neck of the bladder; and neither of these organs could expel its contents with the precise arrangement that obtains.

4th. *Physiologically*, a distinction is to be made between the body and the neck of the uterus; but even here they are to be regarded as one and the same organ. The function of menstruation is performed by the body, and not at all by the cervix, but the Fallopian tubes also participate with the body in that function. Gestation also is accomplished by the body, and very slightly, if at all, by the cervix (for he would not here discuss the question of the obliteration of the cervix by merging into the body in the latter months of pregnancy). The mucus secreted by the cervix differs from that of the body also. But the great culminating function of the body of the uterus is par-

*turition*, and in this the cervix acts an important part—as a portion of the same organ. Viewed in respect to this function, the cervix is merely the sphincter muscle of the body, as at the end of the rectum we find the sphincter muscle of that canal. The office of both is also the same, viz., to prevent the premature evacuation of the canal which it closes. But a sphincter can never open itself; it must be forced open, as is the case with the sphincter ani, or pulled and forced at the same time, as is the case with the cervix uteri and the neck of the bladder. And the continuation of the longitudinal fibres of the body of the uterus into the cervix, both anteriorly and posteriorly, as has been explained, is the only arrangement which could accomplish this double effect on the cervix which has just been mentioned. The cervix and the body of the uterus are, then, not distinct organs.

5th. Nor do we discover the asserted independence of the cervix uteri and the body, when we consider their *pathological* relations. Endocervicitis may, and often does, exist without extending into the uterine cavity, and becoming endometritis also; and cervicitis occurs independently of metritis proper; though both metritis and endometritis far less frequently occur uncomplicated with cervicitis and endocervicitis. Still, we know that an irritation in the cervical canal by a sponge-tent frequently produces endometritis as well as a miscarriage in case of pregnancy; and that the common cause of metritis proper in newly-married woman is contusion of the cervix. In other words, certain pathological states of the cervix often extend their influence directly to the body of the uterus, as we might expect; and others extend more frequently in the reverse direction: though both these facts are inconsistent with the idea that these parts are distinct organs.

6th. Finally, the cervix and the body of the uterus are not distinct organs in a *therapeutical* point of view; and this is a fact of the highest practical importance. If we cannot affect the body of the womb, as has been asserted, by any application to the cervix, of course all local treatment must be abandoned as useless; since applications to any other part must, by parity of reasoning, be even less efficient still. If the abstraction of blood from the cervix does not modify the circulation of the body of the uterus, when both are supplied by vessels from the same source, he could not imagine how we could affect the uterine circulation by leeching or scarification at any other point. But what are the facts? He had noticed that scarifications, often repeated, of the cervix, in the cases under discuss-

sion, produce immediate relief in most cases, and which is frequently permanent; and Dr. Barker also has admitted the relief, though he believes it is merely temporary. But any degree of relief shows that the circulation of the body of the uterus is thus modified. Besides, Dr. Barker places his main confidence, so far as local treatment is concerned, in vaginal injections of warm water—a practice quite irrational if the cervix and body are independent organs; but which also was occasionally resorted to by himself, on the principle that the water thus applied to the cervix extends its effects to the body also.

But he (Dr. P.) would not extend his remarks further on the question of the dependence of these two portions of the uterus. Dr. Kammerer had remarked that he knew of no treatment which would remove the induration of the uterus before mentioned. Dr. P. regretted that he could not shed much light on that point; but he thought we must trust mainly to the bichloride of mercury, bromide of potassium, electro-magnetism, and especially to *time*.

The meeting then adjourned.

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### THE MEDICAL USE OF ELECTRICITY.

By G. M. BEARD, M.D. and A. D. ROCKWELL, M.D., New York.

The history of the medical employment of electricity has been marked by many and peculiar disappointments.

It was very natural to infer that an agent at once so mighty and mysterious in its phenomena, should have a great power for good or evil over the human constitution. Hence we find, that after the researches of Galvani had abundantly established the doctrine of the existence of animal electricity, very many enthusiastic observers set themselves to the task of demonstrating the medicinal virtues of this subtle fluid. Their experiments were attended with a measure of success. Aldini, in 1795; Hufeland, in 1798; Alibert, in 1817; and Dr. Mansford, in 1818, clearly establish the fact of the remedial powers of static electricity in certain forms of paralysis and epilepsy. The discovery of the induction current by the great Faraday, in 1831, gave a new impetus to the scientific investigations in this department. Matteucci, Du Bois Reymond, Golding Bird, Duchenne, Remak, and more recently, Brown-Séquard, Rosenthal, Meyer, Benedict, and Ziemssen, have all labored diligently in

the field of physiological and medical electricity, and have brought many and valuable sheaves with them.

By these investigators, the remedial, as well as the physiological, effects of electrization have been repeatedly demonstrated. They have proved that, not only in paralysis and epilepsy, but also in cases of debility and impaired nerve energy, electricity is an agent of vast and wondrous power. And yet, outside of the ranks of these original explorers, there are comparatively few in the profession who have given the subject sufficient heed even to inform themselves as to the diseases for which galvanization or faradization are specially applicable. This apathy of the medical world with regard to the success of experiments that promise so much and so surely for the department of therapeutics, is to be accounted for by a variety of reasons. First of all, electricity, in the various methods in which it is employed, has not fulfilled the general expectation. It has been found to fail utterly in many cases where theoretically it should have achieved the most absolute success; and hence many, disappointed and perhaps disheartened, have illogically concluded that their expectations were not well grounded.

Again, in our country at least, the practical application of this agent has fallen into the hands of uneducated and unscrupulous practitioners, who know little of the human system, or of the science of medicine, and still less of the agent they employ. Empirics and charlatans, versed in no art except that of robbing the unfortunate, have thus far had the field mostly to themselves, and have improved their advantage by filling their own pockets without adding an iota to the world's stock of experience. Whatever valuable truths they may have stumbled upon by their abundant observations are known only to themselves, and are regarded by them merely as tricks of trade, and in the very nature of things must die with them. Electricity appears to be travelling slowly in the footsteps of all our permanent specialities. Twenty years ago, the treatment of the diseases of women was almost exclusively in the hands of ignorant and unprincipled outsiders; gynecology is now one of the most honored and useful departments of science. It is but fifteen years since oculists were linked with contempt in the speech of all who desired to be regarded as authority in medical etiquette; to call oneself a specialist for the eye was a plea of guilty to the grossest ignorance and fraud.

Ten years ago, the diseased throats and ears of the country were at the mercy of a crowd of the most rapacious sharpers that ever amassed fortunes out of human suffering and credul-

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lity; ten years hence, laryngoscopists and aurists will stand on the same platform with oculists and gynecologists.

It is the duty, and it should be the delight, of scientific men, to wrest the medical employment of electricity from the hands of these selfish harpies, and accord to it that honor to which its merits justly entitle it. At the present time medical practitioners of all grades are not unwilling to recommend electricity in certain cases of paralysis, that will neither yield to internal medication nor get well in spite of it; but they usually allow their patients to use some kind of apparatus at home, or else content themselves with two or three imperfect applications under their own eyes. The results in such cases are almost always unsatisfactory. It could not, indeed, be otherwise. In this way, more than in any other, electricity has been wounded in the homes of its friends. To one case that is cured or relieved by such slipshod procedures, ten are either made worse, or else so little benefitted that they cast their batteries aside, and ever afterwards declare that electricity is a humbug. The truth is, that there is no more sense or reason in allowing patients to make their own applications of the electric current, than there would be in intrusting them with the responsibility of cutting their own veins, or operating on their own ears and eyes. In three important particulars we are apt to mistake the employment of electricity. 1. By neglecting to make just discrimination in regard to the types and phases of disease that are found to yield most readily and surely to this method of treatment. 2. By intrusting the details of the applications to the patients themselves, or some of their non-professional attendants. 3. By not making the applications with sufficient thoroughness and persistence.

Our attention having been called to this subject for some time past, we have found that the range of diseases amenable to this form of treatment is much wider than we had ever supposed. We have found that faradization, or the use of the secondary current, is especially indicated in cases of indigestion in all its myriad shapes; in nervous derangements, when they take the form of chorea, epilepsy, neuralgia, or hypochondriasis; and in general debility and anaemia, dependent on any cause except pulmonary tuberculosis. In our experiments thus far we have made use of Smee's battery, as manufactured by Kidder, of this city, and we have employed in most cases only the secondary current. It is very far from being a fixed fact of medical science that the primary current is capable of succeeding when the secondary fails; but, if it be used at all, it is nec-

essary to obtain the combined strength of a number of elements. The primary current of the battery we use is too weak to be of any special service in ordinary cases, and we have never secured from it any results that could not have been obtained just as surely, and far more rapidly, by faradization. Stöhrer's large battery, consisting of twenty-four or thirty-two elements, is a most excellent instrument, and is much employed by Ziemssen, Rosenthal, and other German investigators.

Three different methods of applying electricity have been recommended by Duchenne; by solid metallic electrodes, metallic brushes, and the hand.

Of these methods we must prefer the latter.

No instrument that human skill shall devise can ever equal the hand in flexibility and power of adaption. If the feet of the patient be placed on a sheet of copper to which the negative pole is attached, the operator, holding the positive pole in one hand, can with the other readily manipulate the parts desired to be affected, and by increasing or diminishing his grasp of the sponge, can modify the strength of the application without disturbing his apparatus.

Used in this way, the current must pass through the body of the operator. The first essays of those who may employ electricity through their own persons, must always be unsatisfactory. They will find that they can bear only a very feeble current, or at least one not strong enough to effect any but the weakest patients, or the most sensitive localities. But practice is everything here, as in the use of all other appliances of medicine. According to our observation and experience, the system appears to become accustomed to the powerful electric stream, just as it becomes accustomed to the use of tobacco, alcohol, opium, hasheesh, or coca; with this difference, that its effects are, if anything, positively beneficial.

Dr. Garratt, of Boston, (whose abundant opportunities for observation and varied practical experience in the medical employment of electricity, entitle his views to more consideration than those who have attempted to wade through the verbose and mystic rhetoric of his recent work will be willing to accord to him), advises "that the operator use the same hand that holds the electrode, so as to prevent the passage of so high an induction current through his own person, which is thus to himself highly injurious and unsafe to be long continued or often repeated."

It would be very natural to infer that an agent so potent in

the cure of disease must be prejudicial to health when used in large excess, for such is found to be the case with nearly all the prominent articles of the *materia medica*.

It is on this probability that Dr. Garratt bases his words of warning; but the facts are against him. Obstinate experience will not wheel into line at the command of any scientific theory, however consistent or plausible.

We have now been employing faradization through our own persons for some time, and the effects have thus far been either negative or beneficial.

We have both enjoyed our average health since we began to use the agent, and both have observed a marked development of the strength and size of the muscles of the arm. Wm. Miller, of this city, a man of no special medical education, but of the utmost reliability, and thoroughly experienced in the practical application of the faradaic current, informs us that for the past thirty-five years he has allowed the stream to pass through his own body on an average of about five hours each day. By mathematical computation, then, it appears that a powerful induced current of electricity has been passing through him for about seven years of his life. Up to the present time, his general health has been excellent, has, indeed, improved under the mighty stimulus, and he has suffered from no disease that can even be remotely ascribed to electricity. It is safe to say that no parallel instance can be found in either hemisphere.

Our experience thus far seems to have taught us three important facts:—

1. Faradization is a *tonic* of vast and varied powers, and it is chiefly through its tonic effects that it so rapidly and so surely benefits so many chronic asthenic diseases. It almost uniformly relieves chorea, dyspepsia, jaundice, constipation, neuralgia, and chronic rheumatism; also, anaemia, when dependent on functional nervous derangement; and when faithfully and persistently employed, it not unfrequently works a permanent cure. Whether these tonic effects of faradization are the result of its mechanical action, or of some subtle nerve power that it mysteriously imparts to the system, or of both combined, we are of course unable to say. Nor is the question a vital one, however interesting it may be to the inquiring spirit of science.

The operators of the Atlantic cable inform us that enough electricity can be generated in a vessel no larger than a gun cap, to send a message from continent to continent, and they

are ready to confess that they know as little of the nature of this agent as they did when Morse first planned the line to Washington.

Precisely the same principle holds good in the medical employment of electricity. Our ignorance of the rationale of its workings is no bar to our progress in the knowledge of its effects.

2. To gain satisfactory results from faradization in long standing cases of debility from whatever cause, the applications must be properly made and thoroughly persisted in. After the pendulum has been swinging for years in one direction, it does not make the return beat in an instant.

In employing electricity, just as in the use of medicaments generally, the time required to complete a cure must bear some proportion to the duration of the malady.

3. For the successful employment of electricity in the various diseases for which it is applicable, there is need of much more skill, patience, and experience than is commonly supposed. It cannot be too often repeated, line upon line, and precept upon precept, that no specialty in science, however restricted may be its scope, can be thoroughly mastered without a good measure of skill, energy, and patience. And in regard to this very humble department of electricity, in the selection and care of the apparatus, in the wise discrimination between the cases which are and those which are not amenable to this method of treatment, in the acquiring of the requisite facility and effectiveness of application—in the entire mastering of the whole subject, there is a wide range for the exercise of scientific genius and diligence, and as imperious a necessity for large and varied experience, as in any other department of therapeutics.—*Medical Record, N. Y.*

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#### NEW YORK MEDICAL JOURNAL ASSOCIATION.

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Stated Reunion, January 11, 1867, Dr. Gurdon Buck in the Chair.

##### PRESENT POSITION OF AURAL SURGERY.

Dr. Roosa remarked that the present method of examining the membrana tympani was a most decided improvement upon the somewhat familiar routine of the old practitioners. This revolution began with Prof. Troltsch's suggestion of the concave mirror, of six-inch focus and having a small central aper-

ture for the convenience of the observer. Prof. T. combined with this the tubular speculum. There were those who even believed that the simple mirror would supersede Desormeaux's endoscope.

Another grand advance had been made in our appreciation of the real objects of interest, which present themselves for inspection. Formerly only the handle of the malleus and the periphery of the drum challenged attention. Now the triangular light spot, which effect, as first shown by Politzer, is due to the traction of the handle of the malleus upon the drum in an inward direction, was taking its proper rank in professional estimation. For the benefit of those who had given but little attention to aural science, he would pass around the illustrations of Dr. Politzer's work, for here this spot was prominently brought forward in the different phases of health and disease. He would also accompany those plates with certain photographic illustrations, obtained from Munich, in which the ossicula auditus and other parts of the ear were very well represented. The last number of Guy's Hospital Reports, as may be seen by a reference to the shelves of the Association, likewise exhibits perforation of the drum, although he objected to the term *normal* drum, as applied to one taken from the dead subject.

Then, again, the eustachian catheter, notwithstanding the assertion that Mr. Turnbull, in London, had killed two patients by its use, was steadily growing in the confidence of surgeons. Apropos of the danger to be encountered, he would answer with the experience of Continental and American surgeons, by whom this most excellent means of diagnosis was highly lauded. The only objection of value, and this a probable accident merely, was a rupture of the mucous membrane, which might produce an emphysema transient in character. Nothing alarming, so far, had occurred in his hands to induce him to abandon the instrument, unless a case of fainting might be regarded as an exception. Certain it is that the catheterism of the eustachian tube is an operation frequently performed in the Eye and Ear Infirmary, and in private practice, without any feeling of dread. The value of the procedure is demonstrable in chronic catarrhal inflammation of the middle ear (the chronic myringitis of Sir William Wilde), but it is not applicable to the treatment of a very rare affection, to wit, the stricture of the tube.

Bougies, for the strictures above alluded to, were now likewise beneficially used. In this mode of treatment, Dr. Francis Simrock, of this city, had a large experience.

With regard to Politzer's method of inflation too much cannot be said. The late Mr. Toynbee proved that the eustachian tube was closed except during the action of certain muscles concerned in deglutition; Politzer practicalized the discovery by requiring the patient to swallow, while the surgeon forced air through a tube, placed in one nostril while the other was closed. In this way, the rush of air through a ruptured membrane was readily appreciated, and at once became a valuable diagnostic sign. If during the experiment the membrana tympani chanced to be ruptured, there need be no apprehensions, since the wound thus caused very readily healed. Dr. R. spoke warmly of this method in those subacute cases, of which the following was a type, and which he would relate as exhibiting its success: A boy of serofulvous constitution, exposed to the action of cold, "gets," in common parlance, "his ears stopped up." This deafness promising to be permanent, he is treated according to the best intelligence of the period, by cauterization of the throat and removal of the tonsils, but without benefit. His physician, as soon as Politzer's method was promulgated, sent for the boy, applied the principle, and was rewarded by the fact that the patient heard an ordinary conversation in five minutes. This patient was again attacked a number of months after, and again in like manner relieved.

Politzer's method, however, was not valuable in chronic peripheral thickening, as shown by change in form of the light spot, etc. Its good effect was chiefly manifest in the removal of mucous accumulations which might take on structural changes. In perforations, Politzer's apparatus had been made available in thoroughly cleansing the canal established as a result of inflammation. This was accomplished by filling the affected ear with warm water, afterwards stuffing the meatus with raw cotton. The tube, cavity of tympanum and external meatus, were thus thoroughly washed out.

The nebulizer was now used in the therapeutics of aural diseases. Dr. Bishop's apparatus for nebulizing the mouth of the eustachian tube very often sends fluid instead of spray, but this freak sometimes being of advantage could hardly be urged as an objection. For the injection of iodine he had found Buttles's inhaler a very useful addition to Politzer's apparatus. Dr. R. alluded to and exhibited a few other appliances, upon the claims of which he descended at some length.

Artificial membrane tympani were now found more generally applicable than before supposed. Mr. Toynbee's disc of rubber being liable to separate from its attachment and act as a for-

eign body in the ear, has been modified by a German, who has ended off the little wire with a spiral arrangement. The disc is secured by one or two of these closely fitting coils, in the same manner that a cork is by the cork-screw. In one case in Dr. R.'s experience the hearing distance was prolonged, during the use of these dies, from one or two inches to two feet, which was certainly a very comfortable gain to the patient.

Then, again, the otoscope, for listening to the passing of air into the middle ear, is a refinement in our means of diagnosis unknown to our predecessors. We have now also better defined ideas regarding the aftergrowths in the ear. What Mr. Toynbee was pleased to call exostoses of arthritic or syphilitic origin, are now accepted as being due to a primary periostitis. We expect, therefore, to prevent their formation. As an earnest, indeed, of the benefits to be derived from the future cultivation of this inviting field of inquiry, it is observed that aural polypi, which are now regarded as exuberant granulations merely, are much less frequently met with than they were ten years ago.

The change in nomenclature points out more exact knowledge of aural diseases, since such terms as otorrhœa, myringitis, etc., which only mislead the student are falling into disuse. We now know that the ceruminous secretions and the inflammation of the middle ear are independent of each other.

The literature of the subject is now no longer meagre; publications of high authority are readily attainable in London, Paris, Vienna, Munich, and New York. In addition to these facilities, we have a German quarterly devoted to the consideration of the topic. In fact, careful, earnest students are pursuing the branch with enthusiasm, and have already been rewarded by the most brilliant returns. For the matter of that, statistics show that, exclusive of the chronic cases inherited by us from a previous generation, we are not more unsuccessful in our therapeutics here than in other parts of the body.

Dr. R., in the course of his remarks, gave some very interesting statistics, collected by himself and Dr. G. M. Beard in the asylums of New York and Hartford, the object of which was to fix the relation sustained by the pharyngeal mucous membrane towards the membrana tympani in the causation of congenital deafmutism. These, he promised, should be published in due time. He also maintained that the difficulties attendant upon the study of the disease were not as great as generally supposed—they need not interfere with the duties of the most active practice.

Dr. Ellsberg called attention to the omission on the part of

Dr. Roosa to mention the importance of inspecting the post-pharyngeal space. The element in diagnosis, in the course of Dr. R.'s extemporaneous remarks, had, no doubt, temporarily escaped the memory of the speaker.

Dr. Roosa acknowledged his indebtedness to the gentleman, and made a few remarks upon rhinoscopy.

The Association then adjourned.

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### **Clinical Reports.**

MERCY HOSPITAL CLINIC:—CARDIAC DISEASE WITH EDEMA OF THE LUNG, ETC.—INFLAMMATION OF KNEE-JOINT.—CLINIC BY PROF. N. S. DAVIS.—*Ward No. 9.* The attention of the class was first called to Mr. B., a German, aged about 24 years. The lecturer reminded the members of the class that they had already once carefully examined the same patient, immediately after his admission to the hospital, eight days previously. At that time, the patient was sitting up in bed, the knees drawn up and the arms resting on them for the purpose of supporting the body in a position a little inclined forward, with extreme dyspnœa. The face was somewhat bloated; expression dull, with constant drowsiness; and the lips, nose, and hands were of a livid or dark purplish color, and colder than natural. The pulse was quick, small, and irregular, and the heart's action irregular, but tumultuous and violent. The tongue was clean; the mouth moist; bowels regular; urine natural though scanty; but loss of appetite and great sense of weakness. Percussion revealed entire dullness over the lower part of the right side. Auscultation afforded no respiratory sound over the whole left side, and only a coarse rhonchus over the upper and anterior part of the right. From the extreme difficulty of breathing and the irregular and violent action of the heart, it was almost impossible to appreciate the cardiac sounds. All that could be learned concerning the history of the case was, that he had been troubled with frequent paroxysms of dyspnœa, called asthma, for two or three years, and a constantly increasing shortness of breath on attempting to take exercise.

In analyzing the symptoms and physical signs, at that time, with a view to diagnosis, it was stated that the dyspnoea, the dullness on percussion, and the absence of respiratory murmur, all indicated greatly increased density of the lungs and a corresponding diminution of capacity for air. And it was stated that such increased density might depend on three different pathological conditions, namely, pneumonic hepatization, compression from pleuritic effusion, and oedema or serous infiltration of the pulmonary tissue. That it was not the first, in the case before us, was evident from the absence of fever, of pneumonic expectoration, and of those rhonchi which are always present in some degree in hepatization, and from the attitude of the patient. We never see a patient with hepatization of the lung sufficiently extensive to render a whole side dull on percussion, and face livid from decarbonization of the blood, habitually seeking to sit upright in bed with the arms resting on the knees, as was the case with this patient. That it was not pleuritic effusion, was equally evident, from the absence of enlargement of the side most affected, the absence of any bulging of the intercostal spaces, and the absence of displacement of the heart; for if the left side of the chest was filled with serous effusion sufficient to suppress the respiratory murmur and render the whole side dull, it would necessarily enlarge the side and crowd the heart towards the sternum.

The class will remember that by this negative process of investigation, as well as by the positive character of the existing symptoms, it was announced as the opinion of the lecturer, that the patient was laboring under extensive oedema of the left lung, with partial oedema of the lower lobe of the right. Whether this state of the lungs had resulted from primary valvular disease of the heart, more especially of the mitral valve, which would obstruct the return of blood from the lungs, or from such a degree of constriction of the bronchial tubes as had prevented sufficient ingress of air to oxygenate and decarbonize the blood, could not be positively determined at that time for reasons already given. The immediate indications for treatment, however, were obvious. The patient was suffering

the direct effects of defective aëration of the blood, while the heart was violently sending the blood to the already engorged and infiltrated lungs faster than it is capable of passing through the pulmonary capillaries. Hence, to increase the oxygenation of the blood, and moderate the violent and unsteady action of the heart, were indications of pressing importance. To accomplish the first, the patient was ordered to have the following:—

R. Pulv. G. Arabic,	Chlorate of Potass.,-----	5ij.
		5ij.

Mix and dissolve in an ordinary tumbler full of cold water, and take a *tablespoonful* every two hours, until the blueness of the lips, nose, and hands was diminished, and then lengthen the intervals to once in four hours. To meet the second indication, three drops of the saturated tincture of veratrum viride were directed to be taken between each of the doses of the chlorate of potassa, and the quantity increased or diminished as should be found necessary to keep the action of the heart more quiet and uniform. This treatment was continued for three days, with a slow but decided improvement in the condition of the patient. The heart's action became more steady; the pulse more regular; the lips, nose, and hands more natural color; and the dyspnoea less. Six-grain doses of iodide of potassa were then given in place of the chlorate, every four hours, and six drops of tinct. gelseminum alternated with it in place of the veratrum viride. This has constituted the treatment until the present time. The patient is now resting in the recumbent position; pulse nearly regular; skin natural in temperature, and much improved in color; but the respiration is still very short and inflation of the lungs very imperfect, with frequent suffocating cough; scanty and tenacious expectoration, and great sense of weariness, yet unable to obtain refreshing sleep.

The patient being quiet and resting in an easy position, each member of the class was required again to listen to the cardiac and respiratory sounds. The heart now acting more slowly and regularly than at the first examination, it was easy to distinguish a rough sound continuous after the first sound of the

heart and coincident with the diastole of the ventricles. It was most audible about one inch below the nipple, nearly over the apex of the heart, thus indicating disease of the mitral valve sufficient to partially obstruct the left auriculo-ventricular opening. On extending the examination to the lungs, it was found that the right lung expanded much more freely than at the time the patient was admitted, although there was still some dullness and sub-mucous rhonchus over the lower and posterior part of that side. The upper lobe of the left lung had become partially permeable, as indicated by some rhonchus, but the dullness was still strongly marked. And the sudden, short expiratory act showed that far less than the natural quantity of air entered the lungs by inspiration. The present examination confirmed the previous diagnosis, so far as related to the pulmonary oedema, and rendered it quite certain that it was complicated with organic valvular disease of the heart. The existence of the latter, rendered the prognosis unfavorable, so far as related to full recovery. And yet, the continuance of judicious treatment may so far improve the condition of the patient as to enable him to take some moderate degree of exercise. The objects to be accomplished by treatment are still the same as were pointed out at the previous clinic, namely, to control the excessive action of the heart; to hasten the reabsorption of the serous effusion or infiltration into the pulmonary tissue; and to promote the rest of the patient. To accomplish these purposes, the patient was directed a simple but nutritious diet; six drops of the saturated tincture of gelseminum half an hour after each meal, and a teaspoonful of the following emulsion every four hours:—

Ry.	Chloroform,	5ij.
	Fl. Ext. Cannabis Ind.,	5ij.
	Iodide Potassa,	5ij.
	Pulv. G. Arabic,	{ aa 5iv.
	White Sugar,	

Rub together, and add,

Mint Water,----- 5ij.

Mix.

CASE II. The second case presented to the class during the

clinic hour, was one in which there had been sub-acute inflammation of the synovial membrane and cartilages of the knee-joint; but which had nearly disappeared under the influence of entire rest and a succession of blisters over different parts of the joint. Of this, our space will not admit even a brief report.

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### *Book Notices.*

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Proceedings of the American Pharmaceutical Association at the Fourteenth Annual Meeting, held in Detroit, Mich., August, 1866. Also the Constitution and Roll of Members, Philadelphia: MERRIHEW & SON, Printers. 1866.

This is a very neatly printed volume of 316 pages, containing the reports, essays, and proceedings presented at the last Annual Meeting. We should think it a work of great value to every intelligent druggist and pharmacist, and several of the reports and papers are equally interesting and valuable to the physician. We think copies can be obtained by applying to E. H. SARGENT, Druggist, corner of Randolph and State Streets, Chicago.

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Diphtheria; A Prize Essay. By E. S. GAILLARD, M.D., Richmond, Va. Reprinted from the *Richmond Medical Journal*.

This is a monograph of 114 pages. Of the many essays written upon this subject during the last ten years, this is certainly one of the best. The author devotes a large part of his work to the elucidation of the pathology of the disease. He regards the disease as a general one, involving a morbid condition of the whole mass of blood, and the development of certain local inflammations of an asthenic character. Of necessity, treatment founded on such views of the pathology, must be corrective and tonic. The correctness of this has been shown by observation at the bedside.

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On the Relations which Electricity sustains to the Causes of

Disease. By S. LITTELL, M.D., Emeritus Surgeon of Will's Hospital, Philadelphia. From the *Transactions of the American Medical Association*.

This is a report of 54 pages, originally presented to the American Medical Association, in Boston, 1865, but not printed in the *Transactions* until the following year. It is an exceedingly interesting and important paper. We have only space for the following summary of doctrines which are appended to the report:—

“1st. That heat and electricity are identical, as the one can be converted into the other.

2d. That a large volume of electricity surrounds every primary constituent of matter, especially that form of matter which constitutes the gaseous bodies.

3d. That animal heat is supported by the electricity liberated from the primary constituents of matter during the processes of respiration, digestion, and assimilation.

4th. That electricity is evolved during these processes on the same principle as that which is evolved during the action of a galvanic arrangement.

5th. That electricity and nervous power are analogous, if not identical, as the action of one can be successfully substituted for the other.

6th. That the majority of diseases are caused either by the sudden obstruction, or slow abduction of electricity from the body.

7th. That a low state of electric tension on the surface of the earth, produced either by the operation of evaporation, or some occult movement in the great internal currents of the earth is the remote cause of epidemic and pestilential diseases.

8th. That occasional and ordinary diseases are produced by the sudden abstraction or slow subduction of electricity from the body, or its sudden elimination during the vital processes.

9th. That since electricity is so essential to the integrity of the vital operations, it is indispensable that measures be taken to produce its evolution, and to prevent over-radiation.

10th. That electricity is the source of vitality in vegetable life.

11th. That electricity is attracted by the fibres of the roots of plants; and by the instrumentality of the electric fluid does the plant attract its constituents from the soil.

12th. That vegetables of rapid growth require a large supply

of electricity to secure their perfection and completion; and the potato is a plant of this kind.

13th. That the disease in the potato was produced by the want of nutrition.

14th. That the want of nutrition arose from defective electric agency.

15th. That the cause of the deficiency of this agency was those abstracting influences which produced low tension of electricity."

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Reduction of Inverted Uteri, by a New Method. By THOMAS ADDIS EMMET, M.D., Surgeon in charge of New York State Women's Hospital.

This is a very neatly printed pamphlet of 15 pages, detailing two cases of reduction of inverted uteri by upward pressure, simultaneous with efforts to dilate the constricting part around the part of the organ last inverted. The first case had existed seven months, and the time consumed in effecting a reduction was *three hours and fifty-five minutes*, the patient being fully under the anaesthetic influence of ether all the time. The second case was one of eight months duration, and was reduced in *one hour and twenty minutes*. These cases, as related by Dr. EMMET, are of great interest and value, and should be read in detail by the profession.

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Clinical Observations on Functional Nervous Disorders. By C. HANDFIELD JONES, M.B., Cantab.; F.R.C.P., London; F.R.S.; Physician to St. Mary's Hospital. Philadelphia: HENRY C. LEA. 1867. pp. 348.

For sale by W. B. KEEN & Co., 148 Lake Street.

Infantile Paralysis, and the Attendant Deformities. By CHAS. FAYETTE TAYLOR, M.D., etc., etc., etc. Philadelphia: J. B. LIPPINCOTT & Co. 1867. pp. 119. Duodecimo.

For sale by S. C. GRIGGS & Co., 41 Lake Street.

Notes on Epidemics. For the Use of the Public. By FRANCIS EDMUND ANSTIE, M.D., F.R.C.P., Senior-Assistant Physician to the Westminster Hospital. First American Edition. Philadelphia: J. B. LIPPINCOTT & Co. 1866. pp. 95. Duodecimo.

For sale by S. C. GRIGGS & Co., 41 Lake Street.

The Common Nature of Epidemics, and their Relations to Climate and Civilization. Also Remarks on Contagion and Quarantine. From Writings and Official Reports. By SOUTHWOOD SMITH, M.D., Physician to the London Fever Hospital, etc., etc., etc. Edited by T. BAKER, Esq. Philadelphia: J. B. LIPPINCOTT & Co. 1866. pp. 130.

For sale by S. C. GRIGGS & Co., 41 Lake St. Price \$1.50.

Lessons upon the Diagnosis and Treatment of Surgical Diseases, Delivered in the month of August, 1865. By Professor VELPEAU, Membre de l'Institute et de l'Académie de Médecine. Collected and edited by A. REGNARD, Interne des Hôpitaux. Reviewed by the Professor. Translated by W. C. B. FIFIELD, M.D. Boston: JAMES CAMPBELL. 1866. Duodecimo. pp. 103. Price \$1.00

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### Editorial.

MEDICAL CONVENTION.—At the meeting of the American Medical Association, held in the City of Baltimore, May 3d, 1866, the following resolution was adopted with much unanimity, and the undersigned appointed a Committee to aid in carrying it into practical effect:—

*Resolved*, That this Association earnestly requests the Medical Colleges of the country to hold a Convention for the purpose of thoroughly revising the present system of Medical College instruction, and that a Committee be appointed to aid in carrying the resolution into effect.

In fulfilling the duties enjoined on them, the undersigned respectfully and earnestly invite the Trustess and Faculty of each of the regularly organized Medical Colleges in the United States to send representatives to a Convention to be held in the City of Cincinnati, Ohio, on Friday preceding the next Annual Meeting of the American Medical Association; namely, on the 3d day of May, 1867. We would also respectfully sug-

gest that all delegates to such Convention be prepared to consider fully and act upon the following subjects:—

*First.* The adoption of a more uniform and just rate of Lecture Fees by all the Colleges in this country.

*Second.* The propriety of increasing the length of the Annual Lecture Term, and the number of Professorships.

*Third.* The adoption of measures for securing more thorough attention on the part of students, to the more elementary branches of medical science, and a more progressive order of medical studies.

*Fourth.* The practicability of requiring three Annual Courses of Lectures, instead of two, as a condition of graduation; and of making Hospital Clinical Instruction a necessary part of the Third Course.

*Fifth.* The practicability of establishing and exacting some appropriate standard of preliminary education for young men proposing to enter upon the study of medicine.

Feeling confident that a free interchange of views upon these, and such other topics as the Convention might deem proper, would result in the adoption of measures of great importance to the interests, honor, and usefulness of our profession, we again cordially and earnestly invite your coöperation.

N. S. DAVIS,  
S. D. GROSS,  
WORTHINGTON HOOKER, } Committee.  
M. B. WRIGHT,  
GEO. C. SHATTUCK,

This is a very important movement, and we sincerely hope that the invitation of the Committee will be responded to by every Medical College in the whole country. The time named, allows three working days before the opening of the next meeting of the American Medical Association, during which the important topics connected with the education of the profession could be freely and deliberately considered. It is a movement which has long been demanded by the general sentiment of the profession; and if the older Colleges in Philadelphia, New York, and Boston promptly respond to the invitation of the

Committee, the Convention will result in the accomplishment of much good.

**ILLINOIS STATE MEDICAL SOCIETY.**—The next Annual Meeting of this Society will be held on the first Tuesday in June, at Springfield. The Committees expected to report at that meeting are as follows:—

*Committee on Practical Medicine.*—Drs. J. Adams Allen, of Chicago; R. E. McVey, of Waverly; and L. T. Hewins, of Loda.

*On Surgery.*—Drs. H. W. Davis, of Paris; C. R. Parke, of Bloomington; and G. R. Bibb, of Jacksonville.

*On Obstetrics.*—Drs. DeLaskie Miller, of Chicago; N. Wright, of Chatham; J. N. Ralston of Quincy.

*On Drugs and Medicines.*—Drs. P. H. Bailhache, of Springfield; N. T. Quales, of Chicago; and J. Miner, of Waverly.

*On Ophthalmology.*—Dr. E. L. Holmes, of Chicago.

*On Spinal Curvatures and Hip-Disease.*—Drs. J. W. Freer, and R. G. Bogue, of Chicago.

*On Plastic Surgery.*—Dr. David Prince, of Jacksonville.

*On the Co-Relation of Electricity and Nervous Force.*—Dr. D. T. Kyner, of Macon.

*On Specialties and Medical Advertising.*—Drs. T. D. Fitch and N. S. Davis, of Chicago; and D. Prince, of Jacksonville.

*On the Radical Cure of Reducible Hernia.*—Dr. G. T. Allen, of Springfield.

*On Syphilis.*—Dr. W. M. Chambers, of Charleston.

We hope the profession in every part of the State will be represented, for we are sure the meeting will be both interesting and profitable. The Volume of Transactions for 1866, has been published and copies sent to all members who are credited with the payment of the annual assessment on the books of the Treasurer.

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**RUSH MEDICAL COLLEGE COMMENCEMENT.**—The twenty-fourth Annual Commencement of this Institution was held on Wednesday evening, January 30th, 1867; at the end of their

usual 16 weeks Lecture Term. Prof. J. V. Z. BLANEY, who had been lately elected President of the Faculty, in the place of the late Prof. BRAINARD, conferred the degree of M.D. on 72 candidates; being about 20 less than the number graduated the year previous. Before conferring the degrees, Prof. BLANEY paid an appropriate tribute to the memory of his predecessor, Prof. BRAINARD.

The Valedictory Address was delivered by Prof. E. INGALLS, and consisted mainly, as it should, of plain, practical, common sense instructions to the graduating class.

It was officially announced that Prof. MOSES GUNN, of Detroit, had received and accepted the appointment to the chair of Surgery, made vacant by the death of Prof. BRAINARD.

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CHICAGO MEDICAL COLLEGE COMMENCEMENT.—The Eighth Annual Commencement Exercises of this Institution will take place on Tuesday evening, March 5th, 1867; and will be preceded by a public examination of the candidates in class, during the preceding day. There is an excellent class in attendance, and we have no doubt but its members will sustain themselves creditably, throughout the unusually extended examinations to which they are subjected in this College.

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PHYSICIAN'S POCKET RECORD.—We have received, from the office of the *Philadelphia Medical and Surgical Reporter*, a copy of the *Pocket Record*, which was noticed and its contents quoted in a recent number of the *EXAMINER*. It is published and bound in excellent style, and in its size, arrangement, and contents is, perhaps, the most convenient and useful visiting list and memorandum book for the physician that has yet been published. Price \$1.50.

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BOOKS NOT RECEIVED.—We see, by our exchanges, that Dr. D. PRINCE, of Jacksonville, has published a volume on *Orthopaedic Surgery*, which is a revision of his report on that subject to the Illinois State Medical Society. Though the publishers have not favored us with a copy, we nevertheless assure our readers that it is one of the best practical works on that sub-

ject that has been written, either in this country or in Europe.

We also notice, in some of our exchanges, that a new edition of *Wood's Practice of Medicine* has been issued, carefully revised by its author. Though our recommendation of the work has, probably, aided in its sale throughout the North-west during the last 15 years, more than any other one individual, yet we were not favored with a copy of the former editions, nor, thus far, one of this. We do not complain of this, for, happily, we are able to buy the new edition, and independent enough to recommend it, as we have done the former ones, so far as we deem it worthy. And if the publishers should send us a dozen copies, we would do nothing more.

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#### NOTES UPON GENERAL SCIENCE.

##### GEOLOGICAL DISCOVERIES IN THE EXCAVATION OF CHICAGO

TUNNEL.—In order to obtain for the City of Chicago a full supply of pure lake water, a tunnel has been dug, commencing at the shore and extending two miles outward, under the bed of Lake Michigan. This excavation is, its whole distance, through the formation called by geologists, "glacial drift," "boulder formation," etc. It is a hard clay, full of boulders, many of which show, by peculiar marks and parallel scratches on their surfaces, that they have, at some former period, been imbedded in moving glaciers, like those of the Alps. Prof. AGASSIZ maintains that wherever this drift is found, it has been deposited, not by water, but by glaciers. Other geologists dispute this, and claim that the drift was deposited by water, and that the boulders were dropped from icebergs floating on the surface. A very important test question in the case was, whether the glacial drift was stratified or not. If stratified, it is a water deposit. If not, it is a glacier deposit. The excavations in the tunnel show that the glacial drift at this locality is clearly stratified, and, therefore, a water deposit.

In excavating, the workmen opened a spring of inflammable gas, which burned four or five days and then ceased.

A very curious discovery was made, of numerous "pockets" or masses of clean, loose gravel, bedded in the clay in such

forms and singular positions as to show that they were originally masses of frozen gravel, dropped, like boulders, to the bottom, and bedded in the accumulating clay, and, finally, thawed out by internal heat after they were covered up in the earth.

**DEATH OF MAJOR ROBERT KENNICOTT.**—This distinguished young naturalist went on a scientific expedition to the region near Behring's Straits in connection with the officers of the Overland Telegraph Line, which is to enter Asia by that route. He expected to make very valuable discoveries and collections for the Chicago Academy of Sciences. He died instantaneously, on the banks of the Youkan River, in the Russian Possessions, probably from apoplexy. His remains are on the way home. He is lamented as the most active and enthusiastic naturalist of the West, and his death is a great loss to American science.

**FOSIL REMAINS OF THE ISLAND OF MALTA.**—Investigations made in the ravines and caverns of Malta, show an astonishing number of elephants, hippopotami, and other large animals, to have lived there at a former age. The appearances indicate that crowds of animals died at once, from some great convulsion of nature. The geologists who have investigated the deposits, are of the opinion that more animals died at one time than the whole island could support in its present size. They believe that Malta must, at a former period, have been connected with Africa by a tract of territory which is now beneath the sea; and that it became submerged by some convulsion which destroyed the land animals. If this extensive tract were lowest near the present African shore, or began to sink first near there, the effect would be to drive all the animals before the advancing waters until they were concentrated in vast numbers upon the high grounds of the present island, there to die by starvation, or by the submergence of their last refuge in the waves.

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THE expenditures of the New York State Inebriate Asylum from its organization to September 1, 1866, according to a recent report, have been \$401,635 29.

MORTALITY FOR THE MONTH OF JANUARY.—The subjoined is the mortality report of Health Officer Bridges for the past month. It includes an accurate list of the number of deaths, with places of nativity, cause of death, a comparative statement, and other valuable information:—

## CAUSES OF DEATH.

Accidents,-----	3	Fever, Remittent,-----	3
Bronchitis,-----	1	Fever Purperal,-----	1
Burned,-----	1	Fever, Scarlet,-----	21
Cancer,-----	2	Fever, Spotted,-----	1
Childbed,-----	8	Fever, Typhoid,-----	11
Colic,-----	1	Fever, Congestive,-----	1
Congestion of Brain,-----	3	Hydrocephalus,-----	3
Congestion of Lungs,-----	2	Inflammation of Brain,-----	3
Consumption,-----	40	Inflammation of Lungs,-----	10
Convulsions,-----	38	Inflammation of Bowels,-----	3
Croup,-----	11	Inflammation not stated,-----	3
Cold,-----	1	Killed,-----	1
Diabetes,-----	1	Old Age,-----	11
Disease of Brain,-----	1	Pneumonia,-----	1
Disease of Bowels,-----	1	Poisoning,-----	1
Disease of Heart,-----	6	Phthisis Pulmonalis,-----	2
Disease of Kidneys,-----	4	Rheumatism,-----	1
Disease of Liver,-----	2	Stillborn,-----	22
Disease of Lungs,-----	4	Scald,-----	1
Disease of Spine,-----	2	Small-Pox,-----	1
Diarrhoea,-----	4	Suicide,-----	2
Diphtheria,-----	8	Teething,-----	12
Delirium Tremens,-----	2	Whooping-Cough,-----	10
Dropsy,-----	5	Unknown,-----	20
Erysipelas,-----	2		
Epilepsy,-----	1	Total,-----	299

AGES OF THE DECEASED.—Under 5 years, 157; over 5 and under 10 years, 15; over 10 and under 20, 11; over 20 and under 30, 28; over 30 and under 40, 32; over 40 and under 50, 22; over 50 and under 60, 6; over 60 and under 70, 12; over 70 and under 80, 6; over 80 and under 91, 1; unknown, 9. Total, 299.

## NATIVITIES.

Chicago,-----	156	Germany,-----	44	On the Sea,-----	1
Other States,-----	39	Ireland,-----	28	Unknown,-----	5
Canada,-----	5	Norway,-----	3		
Denmark,-----	1	Poland,-----	1	Total,-----	229
England,-----	12	Scotland,-----	4		

## DIVISIONS OF THE CITY.

North,.....	93	South,.....	87	West,.....	119	Total,.....	299
Total number during the month of December,-----							309
Total number last year for the month of January,-----							292

METALLIC SPECTACLES.—M. Foucault recently communicated to the French Academy of Sciences the fact that the sun may be viewed through a lens covered with silver leaf. The sun's disc, shorn of its beams, can thus be clearly seen. Sub-

sequently, M. Melscius made a useful application of Foucault's discovery. Having been injured while making an experiment in the laboratory, his eyes were painfully affected by light. In this condition he had recourse to spectacles with black glasses, such as are used by engine-drivers; over these he put green glasses, which answered pretty well; but on further experiment, he found the best method was to use pale-blue goggles, covered with silver or gold film, and these he recommends to all persons troubled with weak eyes.

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THE HEADQUARTERS OF DRUNKENNESS.—Liverpool has been pronounced the most drunken town in England. And it is true. Its extreme drunkenness arrests the attention of the judges, its pauperism weighs heavily upon the rate-payers; its rate, fifty-six per thousand, appalling. The drunken cases dealt summarily with by the magistrate are set down at the annual rate of one in thirty-three of the population. The habitual drunkards, in their periodic appearances before the bench, form an endless chain of besotted creatures. According to the recently published judicial statistics there are 3,100 habitual drunkards in Liverpool, and they are about equally divided as to sexes.—*Liverpool Albion.*

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POISONED BREAD AT WINONA, ILLINOIS.—It will be remembered that in July last, at a hotel in Winona, Illinois, a large number of persons were poisoned by eating warm biscuit at breakfast. The case attracted much attention, from the fact, that a few days before, some forty persons were in a similar manner poisoned at a hotel in Indianapolis; and from the circumstance, that self-raising flour was charged with having produced the poisoning at Winona. The public had not forgotten the bread-poisoning on a large scale in the State of N. Y., where the metallic lead used to bind the burr-blocks composing the mill-stones had been abraded and mixed with the flour in grinding. The investigation of the Indianapolis case by Prof. Wormley, of Ohio, revealed in the sour milk employed, with saleratus, to make the bread light, five and a-half grains of tartar emetic and a trace of arsenic, in a single pint. A similar case at Atlanta, Georgia, in which a whole family was poisoned, was traced to arsenic introduced by a servant.

The Winona case was taken up by the physicians and drugists of the place, and prosecuted till they and the victims generally became satisfied that the self-raising flour had nothing to do with the poisoning. The investigation was renewed by

Prof. Horsford, of Cambridge, Mass., and the results at which he arrived are embodied in the following statement:—

1. That there was substantially no self-raising flour in the batch from which the biscuit were made.
2. That poison was introduced into the biscuit, through the sour milk employed with saleratus, in ordinary flour, to make the biscuit light.
3. That the poison was introduced by design.
4. That the poison was arsenic.—*Medical and Surgical Reporter.*

**A REMARKABLE SOLVENT.**—It is now discovered, it appears, that if a piece of copper be dissolved in ammonia, a solvent will be obtained, not only for lignine, the most important principle of all woody fibre — such as cotton flax, paper, etc.—but also for substances derived from the animal kingdom, such as wool and silk. By the solution of any of these an excellent cement and water-proofer is said to be formed; and, what is equally important, if cotton fabrics be saturated with the solution of wool, they will be enabled to take the dyes — such as the lac dye and cochineal hitherto suited to woollen goods only.

—*Exchange.*

**A NEW INSTRUMENT FOR SUBCUTANEOUS INJECTIONS.**—M. Bouillaud lately presented to the Academy of Medicine of Paris an invention of M. Dancet, consisting of a hollow needle adapted to a metallic tube, ending in a small cup covered with an india-rubber membrane. By slight pressure upon the latter the fluid is injected into the areolar tissue, and a simple mechanism within the cup allows of the counting of the drops injected. Another and simpler needle on the same principle may be used for vaccination.—*Buffalo Med. and Sug. Journal.*

**WHITE PASTE.**—Make the following mixture, which will adhere to any substance:—Sugar of lead and alum, each 720 grs.; both are dissolved in water. Take 2½ ounces of gum arabic, and dissolved in two quarts of warm water. Mix in a dish 1 pound of wheat flour with the gum water cold, till pasty inconsistence. Put the dish on the fire, and pour into it the mixture of alum and sugar of lead. Shake well, and take it off the fire when it shows signs of ebullition. Let the whole cool, and the paste is made. If the paste is too thick, add to it some gum water, till in proper consistence.—*Journal of Applied Chemistry.*

**CHOLERA AND QUARANTINE.**—The *British Medical Journal* says, that it is the intention of the Egyptian government to institute precautionary measures against the importation of cholera by the Mohammedan pilgrims next year. The quarantine measures which it has been proposed should be adopted, have been framed with regard to both vessels and caravans, and are to the following effect:—All vessels with pilgrims are to be subjected to interroga-tion, and if found to have had cholera on board, are to be sent to perform quarantine. All caravans are likewise, if necessary, to undergo quarantine, for which special accommodation is proposed to be provided. And should cholera break out in the Hedjaz, it is proposed that no communication between that province and Egypt should be allowed by sea.—*Philadelphia Med. and Surg. Reporter.*

**THE GAIN IN THE AVERAGE DURATION OF HUMAN LIFE.**—Dr. C. A. Logan, in his “Report on the Sanitary Relations of the State of Kansas,” cites the example of Geneva, in Switzerland, where an accurate record of the population, births, and deaths, has been kept for more than three centuries past, or since the year 1560. By a series of historical and statistical compilations, M. Mallet has ascertained that from the year 1560 to the year 1600, the mean duration of the lives of the people was, in round numbers, twenty-one years and two months. During the seventeenth century, the mean life had increased to twenty-five years and nine months; and in 1833, it had reached forty-five years and five months, being nearly double what it was about two centuries before. This result was brought about by a most salutary regulation of the public health, through which much of the former unnecessary sickness was prevented.

**THE PARIS EXPOSITION.**—“The improvements in Hospital construction and equipment, in surgical appliances, in means of transportation of sick and wounded, etc., resulting from the vast experience of the War, are considered worthy of exhibition as an evidence of National progress, and with this view, models of U. S. General Hospitals, with their equipment, of ambulances, litters, medicine wagons, etc., have been prepared, and will be forwarded through the proper channels as the contribution of the Medical Department U. S. A., to the Paris Exposition.”

**INTERNATIONAL MEDICAL CONGRESS OF PARIS.**—An International Medical Congress is to be held in Paris on the 16th of

August, 1867, under the auspices of his Excellency the Minister of Public Instruction. The Congress will be exclusively scientific, and will last two weeks. The labors of the Congress will include communications upon questions proposed by the committee, and also upon subjects not in their programme, which runs as follows:—1. The Anatomy and Pathological Physiology of Tubercle—On Tuberculosis in different Countries, and its influence on the General Mortality. 2. The general Accidents which cause Death after Surgical Operations. 3. Is it possible to propose to the various Governments efficacious measures for restraining the Propagation of Venereal Diseases? 4. On the influence of the Dietary of different Countries in the Production of given Diseases. 5. On the influence of Climate, Race, and different Conditions of Life on Menstruation in various Countries. 6. On Acclimatization of European Races in Tropical Countries. 7. On the Entozoa and Entophytes which may be developed in Man.

Those who desire to bring forward communications on these or any other subjects, are requested to address their manuscripts to the General Secretary at least three week (July 26th) before the opening of the Congress.

With a view of limiting and defining the questions in the programme, the committee has appended to each article commentaries, which we cannot now quote, but to which we shall subsequently refer, indicating the points to which it desires that papers should be especially directed. Foreigners may become members of the Congress by addressing a communication to Dr. Jaccoud, Secrétaire General, Rue Drouot 4, à Paris.—*London Lancet.*

The idea of this Convention is an excellent one, and steps have been taken in Boston to secure a representative from members of the Massachusetts Medical Society residing within the Suffolk District.—*Boston Medical and Surgical Journal.*

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EUSTACHIAN TUBE NORMALLY CLOSED EXCEPT IN DEGLUTITION.—Dr. James Jago, in a communication on the Functions of the Tympanum, published in the *British and Foreign Medico-Chirurgical Review*, defends with much plausibility the view which he had propounded before, in an Essay on the Eustachian Tube, that the normal condition of this passage is that of closure, except during the act of deglutition. This opinion is based on experiments in his own person, aided by an accidental condition of the fauces, arising from contraction of the tissues on the right side, following amputation of a portion of the

uvula. His paper is a very interesting one, and his arguments are most convincing. With regard to the provision for opening the tubes on occasion, he says:—

“That it is not the egress of sonorous vibrations from the tympanum which is to be feared, that being a matter of indifference.

“But there must be a provision against the ingress of aerial undulations from the throat, which, if admitted, would threaten the membrana tympani with incessant oscillations, and endanger both its integrity and that of the complex and delicate apparatus in connection, and violate the peace of the labyrinth *via* this sudden route with all the sonorous impulses impressed upon the animal's breath.

“That, therefore, the moment seized for bringing the tympanum into communication with the fauces must be one in which there can be no respiratory current.

“That the only instant compelling a suspension of respiration is that in which the act of swallowing is performed, and must therefore be embraced for the service just named.

“Finally, the same rule secures the tympanum against the introduction of gastric gases, etc., evolved through the fauces.”

—*Ibid.*

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Prof. Unger, the eminent Viennese botanist and palæontologist, has been recently examining the bricks used by the ancient Egyptians in the construction of the Pyramids, and more particularly those of the Pyramid of Dashour. He has discovered that the mud of which they were made contained not only a quantity of animal and vegetable matter, but also fragments of many manufactured substances, leading to the conclusion that Egypt enjoyed a high degree of civilization upward of 5000 years ago.

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INSUFFLATION OF MEDICATED POWDERS IN GLEET.—Dr. Mallez has contrived an instrument by which medicated powders can be conveyed to the membranous portion of the urethra, a region where lies the cause of the gleet, and which region ordinary injections cannot reach. The instrument is chiefly composed of a catheter opened at both ends, another which glides into it, and an apparatus for receiving and projecting the powders. M. Ricord presented the instrument to the Academy of Medicine of Paris, and cases are mentioned in which excellent results were obtained by insufflating subnitrate of bismuth. It is plain that, by previous micturition, the pow-

der may remain hours in the passage; and it is thought that the vagina, uterus, or any fistulous tract may be reached in the same way.—*Lancet.*

**RAPIDITY OF NERVE ACTION.**—Haller attempted in reading the *Aeneid* aloud, to count the number of letters he could pronounce in a minute. Finding that he could pronounce 1,500, among which the R, according to his statement, requires ten successive contractions of the stylo-glossus, he affirms that a muscle can contract and relax itself 15,000 times in a minute; and as the time of relaxation is as long as that of contraction, each contraction requires about 1-30,000 of a minute, or 1-500 of a second. From this, Haller concludes that the nervous agent requires the 1-500 of a second to go from the brain to the stylo-glossus muscle.—*Revue des Cours Scient.*

## CHICAGO MEDICAL COLLEGE.

The regular Annual Lecture Term in this Institution will commence on the first Monday in October, and continue until the first Tuesday in March following. Clinical Lectures *daily* throughout the term.

### FACULTY.

N. S. DAVIS, M.D., Professor of Principles and Practice of Medicine, and of Clinical Medicine.

W. H. BYFORD, M.D., Professor of Obstetrics and Diseases of Women and Children.

EDMUND ANDREWS, M.D., Professor of Principles and Practice of Surgery, and of Military Surgery.

F. MAHLA, Ph. D., Professor of Organic Chemistry and Toxicology.

H. A. JOHNSON, M.D., Emeritus Professor of Gen. Pathology and Public Hygiene.

J. S. JEWELL, M.D., Professor of Descriptive Anatomy.

J. H. HOLLISTER, M.D., Prof. of Gen. Pathology and Public Hygiene.

RALPH N. ISHAM, M.D., Professor of Surgical Anatomy and Operations of Surgery.

M. O. HEYDOCK, M.D., Professor of Materia Medica and Therapeutics.

F. MAHLA, Ph. D., Professor of Inorganic Chemistry.

R. J. PATTERSON, M.D., Professor of Medical Jurisprudence.

J. M. WOODWORTH, M.D., Lecturer on Physiology and Histology.

E. O. F. ROLER, M.D., Demonstrator of Anatomy.

For the Winter Term, admitting to all the Lectures in the College, ..... \$50.00

Graduation Fee, ..... 20.00

Matriculation Fee, ..... 5.00

Dissecting Ticket, ..... 5.00

Hospital Ticket, ..... 6.00

The Summer Reading and Clinical Term commences on the second Tuesday in March, and continues until the first Tuesday in July; and is free to all matriculated Students of the College. Boarding, \$3.50 to \$4.50 per week. For further information, address

**E. ANDREWS,** Sec'y of the Faculty.